

MANUFACTURERS' RECORD

A Weekly

Southern Industrial and Hardware

Newspaper.

VOL. XIII. NO. 7. WEEKLY.

BALTIMORE, MARCH 24, 1888.

\$3.00 A YEAR.
SINGLE COPIES, 10 CENTS.

Sole Manufacturers of EUREKA PACKING  **JAS. SMITH & CO.**  **Dealers in MANUFACTURERS', MILL and ENGINEERS' SUPPLIES**  **OF EVERY DESCRIPTION.** **CIRCULARS AND PRICE-LISTS MAILED UPON APPLICATION**

Steam, Hydraulic and Locomotive Packing, Works, 413 to 421 Race St., Cor. of Crown.
OF EVERY DESCRIPTION.
Send for Prices.

Office & Store, 137 Market St., Philadelphia.

Milling Outfits for Flour and Meal. 

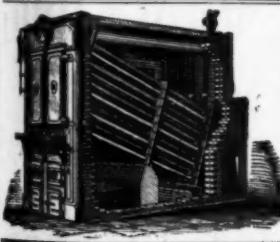
WE MAKE ROLLS AND PORTABLE MILLS COMPLETE.
Manufactory Established in 1851. Pamphlets with Prices Mailed Free.

NORDYKE & MARMON CO., INDIANAPOLIS, IND.

ELEVATORS
Send for Illustrated Circulars.

Report of the AQUEDUCT Commissioners.

[NEW CROTON AQUEDUCT, NEW YORK.]
AN ELABORATE VOLUME, CONTAINING AUTHORITATIVE TABLES BY THE CHIEF ENG., B. S. CHURCH. JUST ISSUED.
PLANT (by actual count from Table 13.) 242
Number of Ingersoll Drills used..... 242
Number of Drills of all other kinds..... 103
PROGRESS (by actual figures from Table 8.) 38-73
Average weekly progress in best 10 headings that used Ingersoll Drills exclusively (omitting all idle weeks)..... 38-73
Average weekly progress in best 10 headings that used other drills exclusively (omitting all idle weeks)..... 31-58
DIFERENCE OF 20 PER CENT. IN FAVOR OF INGERSOLL DRILLS.

INGERSOLL  **ROCK DRILL CO.,** 10 Park Place, New York City.
SELLING AGENTS:
A. B. ENSIGN, Esq., - Rochester, N. Y.
A. S. FISKE, Esq., 44 Johnston Building, Cincinnati, O.
WILLIAM H. SMITH, Esq., 115 Dearborn St., Chicago, Ill.
CHAR. E. ASHCROFT, Esq., 47 Mason Ridge, Boston, Mass.
JOHN S. MOORE, 160 Gravier Street, New Orleans, La.
T. B. PACKER, Shadley Building, Kansas City, Mo.
V. MERRILL, 169 N. Third Street, Philadelphia, Pa.
S. C. DODGE, - Chattanooga, Tenn.

Root's New Water Tube Steam Boiler,
Safe, Economical, Durable.
Recently adopted by the BRUSH ELECTRIC LIGHT CO., at Louisville, the EDISON ELECTRIC LIGHT CO., Detroit, and the COLUMBUS EDISON ELECTRIC LIGHT CO., Columbus, Ohio.

Abendroth & Root Manufacturing Co.
28 CLIFF STREET, - - - - - NEW YORK.

Cotton and Woolen Mill Supplies, Thos. K. Carey & Bros.
LEATHER and RUBBER BELTING, LATHES, PLANERS, DRILLS.
21 S. CHARLES ST., BALTIMORE, MD.
Write for New Machinery Catalogue.

THE MEDART PATENT WROUGHT • RIM • PULLEY.
OVER 300,000 NOW IN USE. THE LIGHTEST, STRONGEST, BEST BALANCED and CHEAPEST in the WORLD.
Shafting, Hangers, Couplings, &c.
MEDART PATENT PULLEY CO., 1906 TO 1914 N. MAIN STREET, ST. LOUIS, MO.
Stores: 99 to 101 W. Second St., Cincinnati.
52 & 54 S. Canal St., Chicago.

FRANK W. SWETT, MANUFACTURER OF BAND SAWS, 69 SOUTH CANAL ST. CHICAGO, ILL. **EVERY BLADE WARRANTED**



Wood Working Machinery



COMPLETE OUTFITS FOR PLANING MILLS

H. B. SMITH MACHINE CO.

Send for catalogue and visit our extensive
warerooms if possible.

925 MARKET STREET.

PHILADA, PA., U. S. A.



ESTABLISHED 1850.

To the Stove and Hardware Trade:

THE LIGHTNING ROD TRADE has undergone a change in the past few years. Formerly men with wagons traveled over the country, but now these men have almost disappeared. The business of erecting rods on houses has passed into the hands of tinsers, hardwaremen and builders, and we simply manufacture them at wholesale for this class of dealers.

The people in each locality prefer patronizing a home firm, and you can just as well sell them their Lightning Conductors at the same time you are doing the tin or roofing work. We furnish printed directions, so that any one can put them up without difficulty. We also manufacture all kinds

WEATHER VANES, GLASS BALLS, &c.

These Conductors have received the highest indorsements ever issued on this class of goods, and are therefore standard. Write for prices and inclose 10 cents in stamps for samples.

MUNSON LIGHTNING CONDUCTOR COMPANY,

INDIANAPOLIS, IND.

EDISON SYSTEM.

REPORT JANUARY 1, 1888:

One Thousand Plants in Successful Operation,
MORE THAN ONE MILLION (1,000,000)
EDISON LAMPS IN USE.

Edison Patents Cover Entire System of Incandescent Lighting.

PLANTS FOR

Hotels, Theatres, Public Buildings, Asylums, Hospitals, Banks, Office Buildings,
Cotton and Woolen Mills, Distilleries, Oil and Sugar Refineries, Paper Mills.

CENTRAL STATIONS FOR TOWNS AND VILLAGES.

Estimates Promptly Furnished for Isolated Plants and Central Stations.

Edison United Mfg. Co.

65 FIFTH AVENUE, NEW YORK.

HOISTING ENGINES FOR MINES, FURNACE AND FACTORY.

—Also, Superior Boilers.—



Hoisting • Machinery

FOR
CONTRACTORS,Bridges, Dock Building, Pile Driving and Excavating.
300 STYLES AND SIZES.

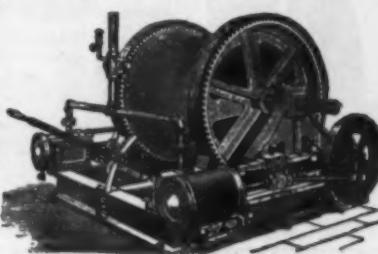
AGENTS:

COOLIDGE & BUCK, Chattanooga, Tenn.

• MINE •

AND
FURNACE HOISTS,
Horizontal Engines

FOR MANUFACTURING.



LIDGERWOOD MFG. CO.

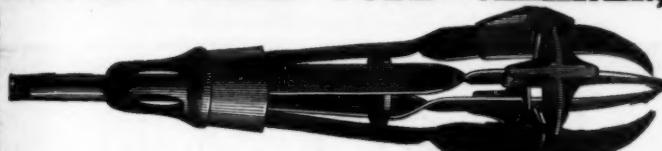
No. 96 Liberty St.
New York.H. A. ROGERS, 19 John Street,
NEW YORK.
RAILWAYAND
Machinists' Supplies.

SOLE AGENTS IN THE U. S. FOR

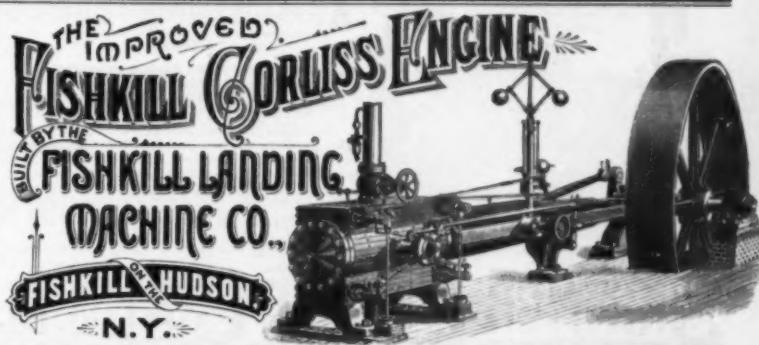
Moncreif's Scotch Gauge Glasses.

GENERAL AGENT CELEBRATED TANITE EMERY WHEELS.

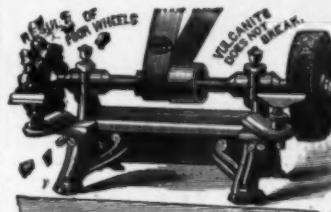
NATIONAL STEEL TUBE CLEANER,



ENDORSED BY THE BEST ENGINEERS.

THE CHALMERS-SPENCE CO., 419 East 8th St., NEW YORK.
P. S. St., Phila.; 131 First Ave., Pittsburgh; 19 Pearl St., Boston; 244 and 246 Lake St., Chicago.

SWIFT RUNNING EMERY WHEELS.

The Original SOLID VULCANITE
EMERY + WHEELS.

Runs Easy and Safe, Cool and True.

Is More Durable—Hence Cheaper.
A trial will convince you of this.
Knife-Grinding Wheels a Specialty.

NEW YORK BELTING & PACKING CO.

Sole Manufacturers,
J. H. CHESTER, 15 Park Row, NEW YORK.

AMERICAN SUPPLY COMPANY,

Formerly Myron Fish & Co., of Valley Falls, R. I., and Kendrick Loom Harness Co., of Providence, R. I.

—MANUFACTURERS OF—

LOOM HARNESS AND REEDS.

Oak Belting, Lace and Picker Leather, and Dealers in Supplies for Cotton, Woolen and Silk Mills.

Roller, Slasher & Clearing Cloths.

RODDICK'S PATENT IMPROVED OIL CANS.

Agents for
Calf, Sheep and Lamb Roller Skins, and Roll Covers' Tools.

Special Notice to Worsted and Silk Mills.

Manufacture both Worsted and Cotton Machine-Knit Mail Harness for Weaving Fine Worsted and Silk Goods. Also a Full Line of Supplies for Jacquard Looms.

Office and Salesrooms, 10 Exchange Place, Providence, R. I.

FACTORIES:

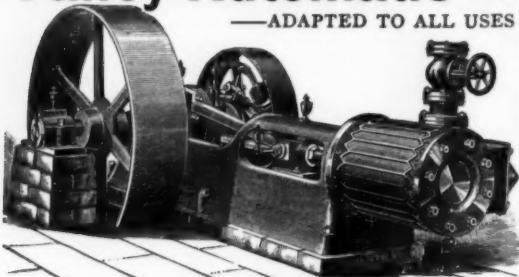
PROVIDENCE and VALLEY FALLS, R. I.

A. D. LOCKWOOD, Pres. JOHN KENDRICK, Vice-Pres. MYRON FISH, Treas. JOHN A. CARTER, Sec. JOSEPH H. KENDRICK, Gen'l Agent.

WE HAVE
Unequalled Facilities for Furnishing
Shuttles, Heddle Frames,
WIRE HEDDLES and WIRE GOODS

of all Descriptions.

Valley Automatic ^{CUT OFF} Engines



ADAPTED TO ALL USES REQUIRING—

Superior Regulation and
Economical Use of Steam.
Send for Illustrated Catalogue.

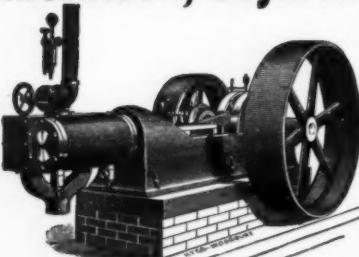
Valley Iron Works,

MANUFACTURERS,

WILLIAMSPORT, PA.

Stocks carried by
W. C. COBB, Baltimore, Md.
JAS. MAHONY & SON,
New York City.
EVANS & SON MACHINE CO.
New Orleans, La.

McIntosh, Seymour & Co., Auburn, N. Y.



Automatic Cut-off Engines

5 to 300 Horse Power.

Economy in Fuel Consumption,
Close Regulation,
Great Durability and Simplicity,
Perfect Workmanship and Design.

Unrivalled in these qualities, our engines are suitable for all purposes, especially where high speed and difficult services are required, as in electric-light plants, rolling mills, etc. Send for Illustrated Catalogue.

SELLING AGENTS :
Young & Thomas, 42 Cortlandt St., New York City
Harlan Page, 142 & 145 N. 3d St., Philadelphia, Pa.
Smith & Courtney, 7470 Main St., Richmond, Va.

SKINNER ENGINE CO., Erie, Pa.

Awarded THREE GOLD MEDALS
by the World's Industrial and Cotton Centennial Exposition of New Orleans, La.

MORE THAN 2700 IN USE.
Manufacturers of PORTABLE & STATIONARY
ENGINES and BOILERS.

Including the WELL KNOWN SKINNER PORTABLE RETURN FLUE BOILER
(SEND FOR ILLUSTRATED CATALOGUE AND PRICES.)

Cleveland Ship Building Co.

SUCCESSORS TO
Cuyahoga Steam Furnace Co.

CLEVELAND, OHIO.

BLOWING ENGINES

FOR

Blast Furnaces

at Steel Plants

A SPECIALTY.

OUR NEW BLOWING ENGINE

NOW FOR SALE. SIZE:

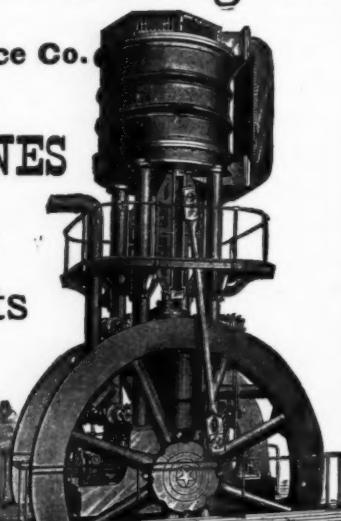
Steam Cylinder. 36x48 | Air Cylinder. 84x48

STEAM HELVE HAMMERS,

From 1,000 to 5,000 lbs.

Engines and Boilers.

Correspondence Solicited.



JARVIS PATENT FURNACE



FOR SETTING STEAM BOILERS.

Economy of Fuel, with increased capacity of Steam Power. Like the Siemens Process of Making Steel, it utilizes the waste gases with hot air on top of the fire. Will burn all kinds of waste fuel without a blast, including Slack Coal, Sawdust, Logwood Chips, &c. Send for Circular.

Jarvis Engineering Co.,
A. F. UPTON, Treas. and Gen'l Manager,
61 Oliver St., Boston, Mass.

SOUTHERN REFERENCES:

Eagle & Phenix Mfg. Company, Columbus, Ga.
Anniston Mfg. Co., Anniston, Ala.
J. P. King Mfg. Co., Augusta, Ga.
Rose Mining Co., Charleston, S. C.
Maryland Pavement Co., Baltimore, Md.
Brush Electric Light Co., Baltimore, Md.
Bittick, Mattoon and Battersby Mfg. Co's.,
Petersburg, Va.
Rasin Fertilizing Co., Baltimore, Md.
Tanner & Delaney Engine Co., Richmond, Va.
Sibley Mills, Augusta, Ga.

For First-Class Steam Boilers, Stacks, Sheet Iron and Plate Work, Oil and Water Tanks,

Address Enterprise Seller Co., Youngstown, O.

Southwark Foundry and Machine Company,

Engineers, Machinists and Boiler Makers,

SOLE MAKERS
Porter-Allen & Southwark
Engines.

Blowing & Reversing
Engines, Steel &

Hydraulic Machinery,
Boilers, Tanks,

and Gas Apparatus.

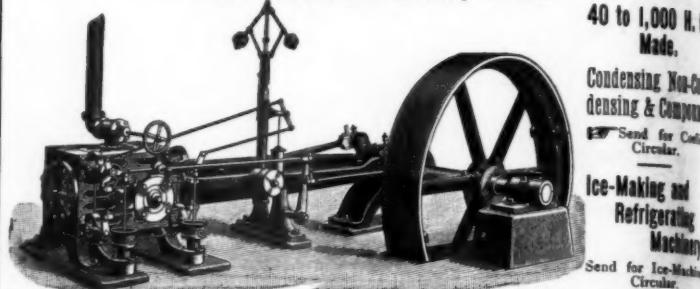
INQUIRIES SOLICITED.

Washington Avenue and Fifth Street, - - - - - PHILADELPHIA, PA.

ECLIPSE CORLISS ENGINES.

Frick Company, Engineers, Builders,

—WAYNESBORO, PA.—



40 to 1,000 H. P.
Made,

Condensing Nu-
densing & Compound

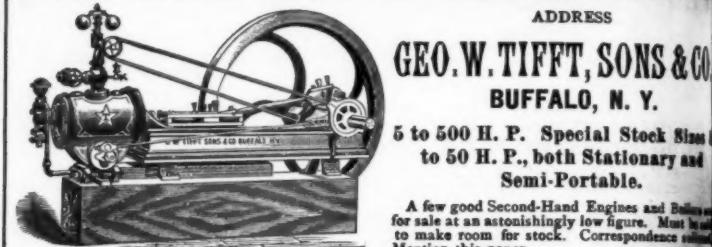
Send for Catalogue
Circular.

Ice-Making and
Refrigerating
Machinery.

Send for Ice-Making
Circular.

Special Automatic Electric Light Engines, Steam Boilers, Saw Mills. Send for our General Catalogue.

—) FOR THE LOWEST-PRICED FIRST-CLASS (— ENGINES & BOILERS



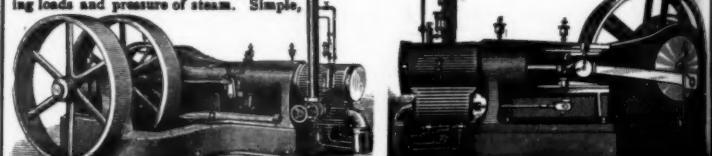
GEO. W. TIFFT, SONS & CO.
BUFFALO, N. Y.

5 to 500 H. P. Special Stock Sizes
to 50 H. P., both Stationary and
Semi-Portable.

A few good Second-Hand Engines and Boilers
for sale at an astonishingly low figure. Must
be made to make room for stock. Correspondence
solicited. Mention this paper.

BECK AUTOMATIC ENGINE.

For Electric Light, Flour, Cotton, Woolen and Rolling
Mill Service and all other purposes requiring power.
Economical in Steam Consumption.
Does not race. Speed constant under varying
loads and pressure of steam. Simple,



durable in construction. Requires less
space than double disc engines. Can
be used for complete steam plants, including boilers and all connections, masonry and erection. All
guaranteed. Send for catalogue and full particulars. Also builders of Portable, Vertical and Stationary
Engines. Boilers of all styles, and Saw Mills. Address TAYLOR MFG. CO., Chambersburg, Pa.



WRIGHT & ADAMS CO.
QUINCY, ILL.

BUILDERS OF
Automatic Cut-off
ENGINES

Double Drum Derrick Engines. Single Drum
Reversing Engines, suitable for Mines
and Rapid Hoisting.

Catalogue sent on application.



Strong, Well Built, Serviceable
STEAM ENGINES

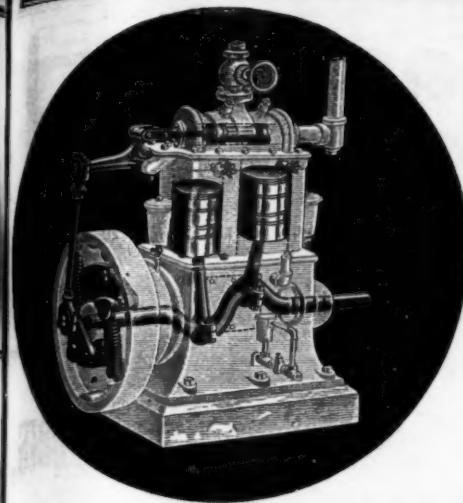
Adapted to Heavy, Continuous
Work. Cost no more than
ordinary Engines. For descriptive
circulars, address

Chandler & Taylor, Indianapolis, Ind.

Continental Boiler Scale Preventive.

Positively prevents and removes scale in steam boilers without acting on any of the metal.
A real necessity for Southern steam users. Saves fuel, repairs and trouble, and doubles
the life of the boiler. Sold on its merits, and satisfaction guaranteed or no pay. Write for
Circular.

The Gleason Boiler Compound Co., Cleveland, Ohio.



THE "JUNIOR" Automatic Engine,

While embodying the essential features of the Westinghouse Standard Engine, well built, economical and serviceable, is nevertheless

The Lowest Priced Automatic Engine in
THE MARKET.
15, 25 and 35 H. P. only.

Westinghouse Machine Co.

PITTSBURGH, PA.

The Aultman & Taylor Company, represented by Roberto Boker & Co., City of Mexico, Mexico; Stevens, Corwin & Co., 118 Chambers Street, N. Y. City, with houses in Panama, C. A.; Lima, Buenos Ayres, Guayaquil and Valparaiso, S. A.

SELLING DEPARTMENT
CONTROLLED BY

Westinghouse, Church, Kerr & Co.

17 Cortlandt Street..... New York.
97 Fifth Avenue..... Pittsburgh.
156 and 158 Lake Street..... Chicago.

Fairbanks & Co.

302 and 304 Washington Avenue..... St. Louis.
1312 Union Avenue..... Kansas City.
1330 Seventeenth Avenue..... Denver, Col.

Utah and Montana Machinery Co.

259 South Main Street..... Salt Lake.
East Granite Street..... Butte, Mont.

Parke & Lacy.

21 and 23 Fremont Street..... San Francisco.
33 and 35 N. Front Street..... Portland, Or.

The D. A. Tompkins Co.

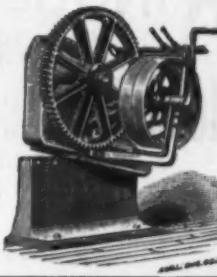
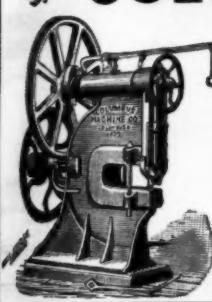
36 S. College St. Charlotte, N. C.
46 S. Pryor St. Atlanta, Georgia.

COLUMBUS MACHINE CO., Columbus, Ohio.

MANUFACTURERS OF

Blast Furnace, Stationary, Portable AND Hoist Steam Engines

Boilers, of all descriptions; Rolling Mills; Drop Presses; Shears for Rail, Bar and Plate
Rolling Mills; Punches and Shears—Single or Combined; Boiler and Sheet Iron
Rolls—Hand or Power; Boiler Makers' Shears and Punches; Shafting
Couplings; Hangings and Pulleys.



Blowing Engines, and Blast Furnace Work in all its branches, a specialty.

Also, HEAVY CASTING AND MACHINERY WORK.

BLAST FURNACE ENGINES ON HAND.

364

The La France Fire Engine Company

ELMIRA, N. Y.

SOLE MANUFACTURERS OF

The La France Piston and *
Rotary Steam Fire Engine.
Hayes' Patent Extension Hook and
* Ladder Truck and Fire Escape.
Heaters and Fire Department Supplies.
Send for Catalogues, etc.



H. P. EDMOND,

1434 E. MAIN STREET, RICHMOND, VA.

GENERAL AGENT FOR

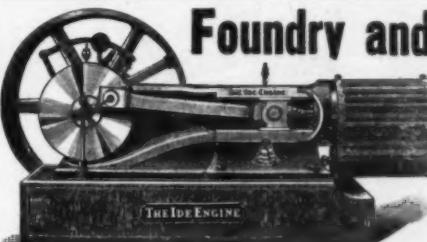
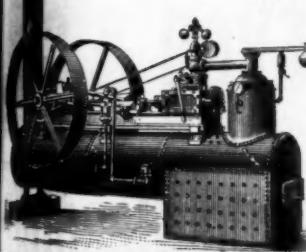
Erie City Iron Works

For Virginia and West Virginia.

Boilers, Engines and Saw Mills,

OTTO SILENT GAS ENGINE²,

Hotchkiss Mechanical Boiler Cleaner, Corliss
Engines, Hydraulic Presses and Pumps,
Steam Cocks, Injectors and
BELTING.

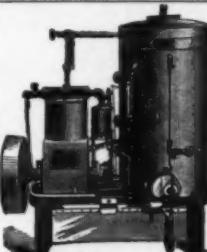


Foundry and Machine Dept.

Harrisburg Car Manufacturing Co.
HARRISBURG, PA.

Engines, Boilers & Complete Power Plants.
Highest award Silver Medal and Diploma
at Franklin Institute Novelty
Exhibition, Phila.

We are operating the finest and most
successful Electric Light Stations in the
world. A change of speed not exceeding
2 per cent. guaranteed, running light and
loaded. Send for catalogue.



Acme Automatic Engine,

With BRYANT'S Patent Safety Boiler.

Sizes 1, 2 and 4 H. P. Fuel, Kerosene (Coal) Oil, 110° to 150° fire test.
No dust, ashes, or smoke. No Skilled Engineer required. "Brake" Tests
show that 3/4 gals. fuel will deliver a full H. P. on belt for 24 hours, in the
case of our 1 H. P. Engine and Boiler.

Rochester Machine Tool Works,
BUILDERS, ROCHESTER, N. Y.
SEND FOR CATALOGUE.

McLAUGHLIN'S IMPROVED ADJUSTABLE STEAM FLUE CLEANER.

IT NEVER FAILS.



Only Adjustable Flue
Cleaner made. Suitable
for any boiler or tube.
Sent to responsible
parties on 30 days' trial.
Agents wanted in every
city in the South and
West. Address,

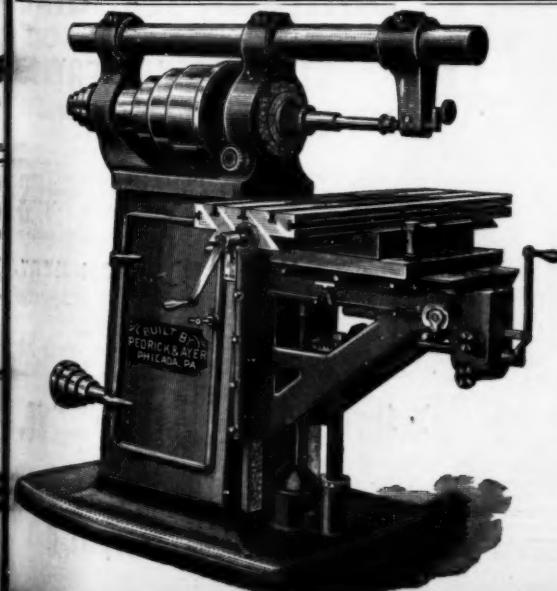
Send for catalogue G.
GEO. G. McLAUGHLIN MANUFACTURING CO.
137 Oliver Street, - - Boston, Mass.

Heavy Universal Milling Machine.

This machine for variety and range of work has no equal, and for workmanship it has no superior. It will be found very valuable for builders of Locomotives, Portable and Stationary Engines and Pumps; Machine Tool Builders and General Machine Shops, as work can be done to better advantage and with greater precision than on Planers, Lathes, Shapers, etc. It is designed for Boring, Facing, Turning, Milling, Profiling, Key-Seating, Splining, Rack Cutting (any length,) Gear Cutting with the Vertical Attachment up to six (6) feet in diameter, etc. Weight, 6,000 Pounds. Smaller sizes of this machine are built. Circulars with full particulars on application.

PEDRICK & AYER,

1025 HAMILTON STREET, PHILADELPHIA, PA.



THOS. P. EGAN, Pres.

EDWIN RUTHVEN, Secy.

FREDERICK DANNER, Supt.

Wood-Working Machinery

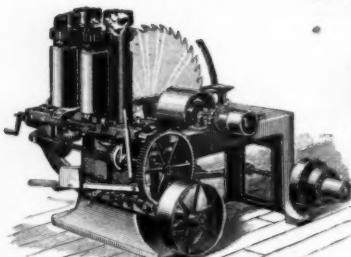
THE EGAN COMPANY

228 to 248 W. Front Street, CINCINNATI, OHIO, U. S. A.

MANUFACTURE THE MOST COMPLETE LINE OF



Carving Machine.

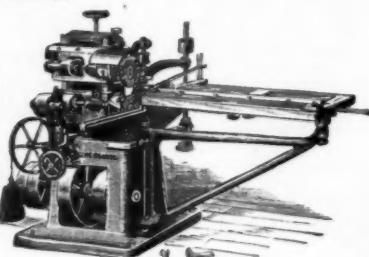


36-inch Circular Resaw.

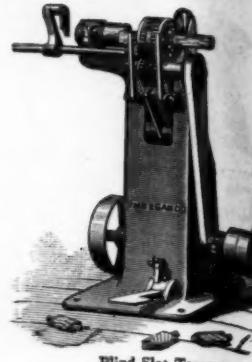
• IMPROVED
Wood-Working
TOOLS
In the United States

Write for Catalogue and Prices.

164



Tenoning Machine.



Blind Slat Tensioner.

KINGSLAND & DOUGLAS MFG. CO.

ST. LOUIS, MO.

Head Blocks-Four Sizes.

COMPLETE LINE

Saw Mill Machinery And Supplies.

SEND FOR CATALOGUE.

Mention in this paper.

Saw Mills-Six Sizes.

—FROM THE—

Largest "Mammoth"

—TO THE—

Smallest "Plantation" Mill.

Saw Mills-Six Sizes.

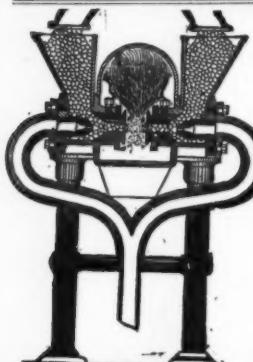


Stedman's Improved Disintegrator and Pulverizer.

This Mill will disintegrate or pulverize materials of all kinds, for brick and tile, for cement and fire brick, and slag from open air furnaces for use in rolling mills, and materials for foundry facings, iron ores, animal matter in almost all conditions,—in fact almost any material that can be disintegrated. It is an improvement over any yet made and the result of practical experience.

Send for Descriptive Circular.

STEDMAN'S
Foundry & Machine Works,
AURORA, IND.



PNEUMATIC PULVERIZER.

The principle of pulverization consists in the employment of

TWO POWERFUL OPPOSING CURRENTS

of dry super-heated steam, so arranged that they continuously charge themselves with crushed or granulated material, and by the great force and velocity of the steam currents the minerals are dashed against each other with such power of concussion as to cause the hardest ores to be pulverized to any degree of fineness desired. The high temperature of the super-heated steam currents employed, through which every minute particle of ore must pass, causes them to become very hot and dry, which produces a beneficial effect upon sulphur and ores containing rusty Gold. The light weight and simplicity of construction of the Pulverizer, the extremely small and inexpensive wearing parts are the WONDER and SURPRISE of all who witness its operation. The Company are prepared to furnish complete plants for pulverizing

10 to 200 Tons Per Day,

including a Sectional Steam Boiler supplying all the power required.

PNEUMATIC PULVERIZER COMPANY,

L. F. HOLMAN, Pres.

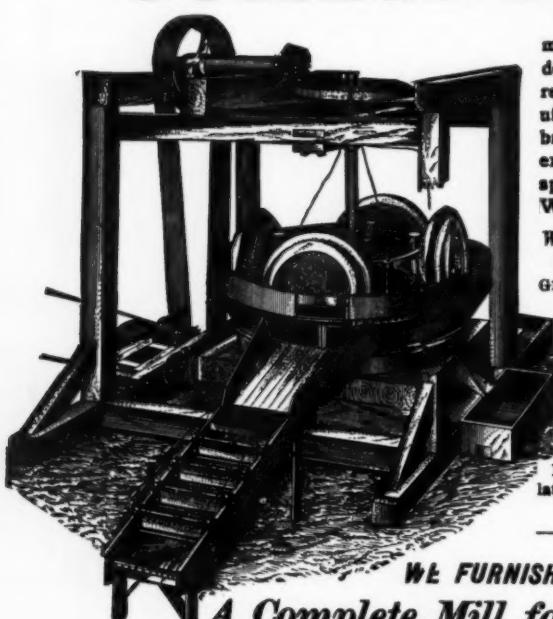
F. A. LUCKENBACH, Supt.

2 and 4 Stone Street, New York.

WRITE FOR PARTICULARS.

Sectional View of Pulverizer.

WISWELL Ore Pulverizer and Amalgamator COMBINED.



The following testimonial from Mr. Marsden, of the firm of Farrel & Marsden, manufacturers of stone-breakers & ore-crushers, Ansonia, Conn., speaks volumes for the Wiswell Mill:

Wiswell Electric Mining Machinery Co.:
GENTLEMEN: After carefully inspecting your mill and seeing it in operation, I do not hesitate to say that it is one of the best, if not the best pulverizer and most complete gold saving machine I have ever seen.

Please accept congratulations for your success.
S. L. MARSDEN.

WE FURNISH

A Complete Mill for \$2,500.

DELIVERED ON BOARD CARS.

For further information address

WISWELL

Electric Mining Machinery Company,

A. A. REEVE, Treas.

4 Post-Office Square, Boston, Mass.

Sullivan Diamond Core Drills

OTTUMWA HOISTING AND HAULING ENGINES

A full line of machinery carried in stock. Contractors for Diamond Drill Prospecting. Send for catalogue and prices.

DIAMOND PROSPECTING CO.

22 W. Lake Street, Chicago, Ill.

Eastern Office, 18 Broadway, New York.



THE GREATEST
ROCK BREAKER
ON
EARTH
CAPACITY ONE TON
ONE MINUTE
50-58 CLINTON
GATES IRON WORKS
CHICAGO

Roller & Detachable Chain Belting

Detachable in every Link
FOR IMPROVED

ELEVATORS,
Conveyors,
and

DRIVING BELTS,
FOR HANDLING

Coal, Ores, Grain,
CLAY, BRICK, &c.

ADDRESS

The JEFFREY MFG. CO.

121 W. STATE ST.,
Columbus, Ohio.

Also Manufacturers of
Legg Coal Mining Machines
and Rotary Power Coal Dell.

Send for Illustrated Catalogue.

M. C. BULLOCK MFG. CO.

MANUFACTURERS OF

Diamond Pointed Rock Drills,
STEAM ENGINES and BOILERS,



Lane's Patent Band Friction Hoisting Machinery,

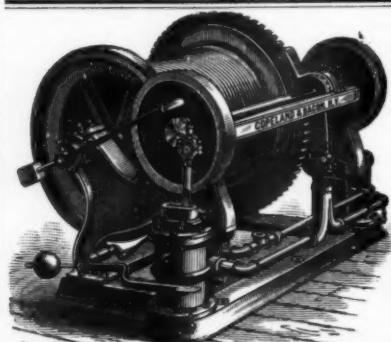
FOR MINES, BLAST FURNACES, DOCKS, ETC.

STRAIGHT LINE ENGINES.

Address,

WORKS:

138 Jackson St., Phoenix Building, Lake and Tallman Av.,
CHICAGO, U. S. A.



BACON Winding Engines.
Furnace Hoists
Mine Hoists.

(With or Without Boilers.)

"Mining PLANTS," Concentrating
Works and Dredging Machinery
Furnished Complete.

COPELAND & BACON,

35 Liberty Street, New York.

309 Arch Street, PHILADELPHIA.

REferences:—Crown Magnetic Iron Mines, Brewster's, N. Y. Crown Point Iron Co., Crown Point, N. Y. Baldwin Iron Co., 52 Broadway, New York. Sea Island Chemical Co., Beaufort, S. C.



W. H. THOMPSON
MANUFACTURER OF
POWER CHAINES.

FOR FORGE, FOUNDRY,
ROLLING, WIRE, WIRE WORKS,
FOUNDRIES, MACHINE SHOPS, DOCKS, MINES,
LIQUIDATION, ETC.

W. H. THOMPSON
MANUFACTURER OF
POWER CHAINES.

CLEVELAND, O.

W. H. THOMPSON
MANUFACTURER OF
POWER CHAINES.

W. H

HOWARD & BULLOUGH'S

OPENERS, LAPERS, REVOLVING FLAT CARDS, ELECTRIC STOP MOTION DRAWING FRAMES, SLUBBING, INTERMEDIATE, REVING AND FINE JACKS, (NEW PATTERNS 1886) ALL MADE BY TOOL WORK; EVERY PART EITHER TURNED, MILLED OR PLANED, AND CONTAINING MANY PATENTED AND VALUABLE IMPROVEMENTS. WARPERS, COPPER CYLINDER SLASHERS, (New Models.)

SOLE IMPORTERS,
RILEY & GRAY, - - BOSTON, MASS.
 CARD CLOTHING, WOOLEN AND WORSTED MACHINERY, Etc., Etc.

PLATT BROTHERS & CO., LIMITED.

MACHINISTS.

HARTFORD WORKS, OLDHAM, LANCASHIRE,

Beg to call the attention of Worsted Spinners and Manufacturers to their Improved Machinery for

Carding, Combing, Preparing, Spinning and Weaving Worsted on the French System.

PLATT BROTHERS & CO., Limited, ARE ALSO MAKERS OF THE FOLLOWING MACHINERY:

New Patent Cleaning Machines for Cotton. New Bale Breaker.
 Crighton's Patent Opening Machines for Cotton.
 Improved Hard Waste Breaking-up Machinery, of any Number of Cylinders.
 Patent Burring Machines for Wool.
 Machinery for Preparing, Spinning and Doubling Worsted Yarns on the English and French Systems.
 Machinery for Preparing, Spinning and Doubling Cotton, Wool and Silk.
 Ring Spinning and Doubling Machines.

Combing Machines for Cotton.—Heilman's or Whipple's Patent.
 Patent Brick-making Machinery.
 Combing Machines for Wool, Worsted, &c.—Little & Eastwood's Patent.
 Machinery for Carding and Spinning Silk Waste.
 Power Looms for all Descriptions of Plain and Fancy Cloths in Cotton and Wool.
 Sizing, Dressing, Warping, Beaming, Winding and Reeling Machinery.
 Cloth-folding and Measuring Machines.
 Hydraulic and Cam Bundling Presses for Yarn and Cloth.

Also Makers of PATENT MACARTHY COTTON GINS, Hand or Power, for long or short-stapled Cottons.

P. B. & Co. Lt. desire to call the attention of Cotton Spinners to their Improved Self-Stripping Revolving Iron Flat Cards.

FOR FURTHER INFORMATION AND PRICES APPLY TO

SAMUEL WOOD, Agent, 123 Chestnut Street, Philadelphia.

Agent for Thompson & Co.'s English Card Clothing of all kinds for Wool, Cotton and Worsted. Ramden's Patent Hardened Tempered Steel Wire, Plain and Tin Plated, a specialty.

Patent Needle Pointed
 Hardened and Tempered Steel Wire
 For COTTON and WOOLEN MILLS.
T. K. EARLE MFG. CO. SEND FOR SAMPLES.
 WORCESTER, MASS.

WALMSLEY'S DEVICE

 For Raising and Supporting the Guide Board or Ring Frames and Twisters. In Fall River alone it is used on over 400,000 spindles, or 97 per cent of all the ring frame spindles in the city. Outside of Fall River its use is scattered from Maine to Delaware, over 400,000 more. Anyone can put them on, being very simple, and its cost nominal.
 For prices and information please address
R. WALMSLEY, FALL RIVER, MASS.
 Patented Jan. 26, 1886.

BROWN & KING, MANUFACTURERS OF COTTON MILL SPECIALTIES.

Roller Covering, Loom Pickers and Strapping.
 Makers in Roller Coverers, Stock and Tools; Cotton and Woolen Mill Supplies.
 Full Line "Hick's" United States Standard Ring Travelers, Mill Wire Goods, Spring Cotters, Belt Hooks, Lacing, &c., kept constantly on hand.
 Wrought Iron Pipe Fittings and Brass Goods. Southern Agents for the celebrated "R. C. & D. Oak Tanned Patent Lap Belting, Galvin Compound Wedge Gate Valve, Liner's Watchman Time Detectors, Diamond Emery Wheel Machine Co., &c."

Office and Salesroom, No. 62 S. Broad Street, ATLANTA, GA.

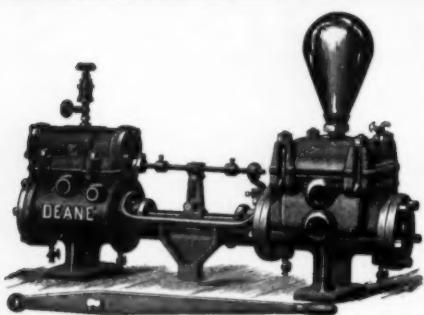
LOOM HARNESS OF SUPERIOR QUALITY,
 MANUFACTURED BY
LOOM PICKER CO.
 Biddeford, Me.

LOWELL CARD CO.
CARD CLOTHING of Every Description,
 Set With Round, Angular, Double-Convex Iron or Steel Wire.
LOWELL, MASS.

DON'T • FORGET •
 THAT WE BUILD THE BEST MACHINES IN THE MARKET
 FOR EXTRACTING THREADS FROM SPINNERS' WASTE,
 AND FURNISH THEM ON TRIAL, SUBJECT TO APPROVAL.
 Write for Prices.
KITSON MACHINE CO., Lowell, Mass.

CHARLES F. TAYLOR,
 Manufacturer of Patent Machine Paper Cop Tubes.

These Tubes are used in a large number of Leading Mills, including
 Lonsdale Company, Lonsdale, R. I.
 Social Manufacturing Co., Woonsocket, R. I.
 Manville Company, Manville, R. I.
 Harmony Mills, Cohoes, N. Y.
 Utica Steam Cotton Mills, Utica, N. Y.
 The New York Mills, New York Mills, N. Y.
 Amoskeag Manufacturing Co., Manchester, N. H.
 Pacific Mills, Lawrence, Mass.
 Atlantic Cotton Mills, Lawrence, Mass.
 Laconia Company, Biddeford, Me.
 Bates Manufacturing Co., Lewiston, Me.
 Lockwood Company, Waterville, Me.
 Tubes furnished promptly for all makes of spindles, American or foreign. Address
CHARLES F. TAYLOR, 5 Custom House St., Providence, R. I.



THE DEANE STEAM PUMP CO.

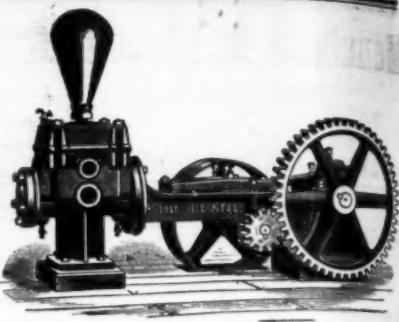
HOLYOKE, MASS.

MANUFACTURERS OF

**Steam and Power Pumping Machinery,
FOR ALL PURPOSES.**

MORTON, REED & CO., Agents, BALTIMORE, MD.

Send for New Illustrated Catalogue, No. 22.



WORTHINGTON STEAM PUMPS

SOUTHERN SELLING AGENTS:

THOS. C. BASSHOR & CO., Baltimore, Md.
KENTUCKY MACHINERY CO., Louisville, Ky.
W. H. PERRY'S MACHINE WORKS, Nashville, Tenn.
LIVERMORE FDRY. & MACH. CO., Memphis, Tenn.

Boston

Philadelphia

SEND FOR ILLUSTRATED CATALOGUE

**HENRY R. WORTHINGTON
NEW YORK.**

Chicago

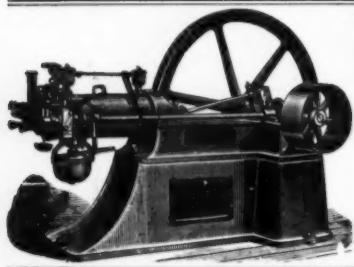
St. Louis

SOUTHERN SELLING AGENTS:

SMITH & COURTNEY, Richmond, Va.
MECKLENBURG IRON WORKS, Charlotte, N. C.
E. V. WHITE & CO., Norfolk, Va.

M. SCHWARTZ, New Orleans, La.

San Francisco



Over 18,000 in Use.

Otto Gas Engine

20 to 70 per cent. less Gas consumption than ANY OTHER ENGINE.

Working Without Boiler, Steam, Coal, Ashes or Attendance.

Started instantly by a Match, it gives full power immediately. When stopped, all expense ceases.

Guaranteed to Consume 25 to 75 Per Cent. less Gas than any other Gas Engine Doing the same Work.

No explosions, no fires nor cinders, no gauges, no pumps, no engineer or other attendant while running. Recommended by insurance companies. UNSURPASSED IN EVERY RESPECT for hoisting in warehouses, printing, ventilating, running small shop, &c. Sizes: 1 to 25-Horse power.

Branch Office, 130 Washington St., Chicago.

OTTO GAS ENGINE WORKS, Schleicher, Schumm & Co. 33d & WALNUT STS., PHILADELPHIA.

WE MANUFACTURE

Automatic Sprinklers,
Roving Frames,
Rabbeth, Sherman, } Spindles,
Whitin, Sawyer, }
Double Adjustable Spinning Rings,
Twisters, Spoolers, Reels,
Spooler-Guides,
Bobbin-Holders,
Banding Machines,

Slasher } Warpings,
Chain }
Warper { Creels and Beams,
Reeds and Combs,
Stop Motions & Clocks,
Balling Machines,
Slasher Cut-Markers,
Separators { Doyle,
Sharples,

Lever Screws for Roving and
Spinning Frames, Lifting-Rod
Cleaners, Traveller Brushes.
Temples { Dutcher, } With Latest
Hardaker, } Improvements.
Shuttle Guards, Durkin's
Thick and Thin Place Preventer,
Getchell's Improved Thompson
Oil Can, Belt Hole Guards.

Milled Machine Screws,
Special Milled Work
of all kinds, etc., etc.

REPAIRS

For Spindles, Temples and all
our Machinery furnished
at short notice.

Send for Prices.

TELEGRAPH ADDRESS AND RAILROAD
STATION, MILFORD, MASS.

GEORGE DRAPER & SONS, HOPEDALE, MASS.



Tested Four Years Before Placing on the Market. Superseding the Ratchet.

Machinists, Boiler Makers, Mechanics and all parties having use for a Ratchet will find this Drill a great saving of time. Can be used in contracted places where a Ratchet cannot. Send for Illustrated Circular and Price List. Mention Paper.

F. F. WATERS MANF'G CO.

38 OLIVER STREET, BOSTON, MASS.



Smith's Patent. Patented June 5, 1882.

PIPE & BOILER COVERINGS. JNO. A. McCONNELL & CO., 119 Water St., Pittsburgh, Pa. SECTIONAL AND PLASTIC. CHEAPEST & BEST. PAMPHLET AND SAMPLES FREE. NAME THIS PAPER.

The York Ice and Refrigerating Machines

York Mfg. Co.

YORK, PA.

ALEXANDER BROWN & SONS, ESTABLISHED 1811. BALTIMORE. Transact a General Foreign and Domestic Banking Business.

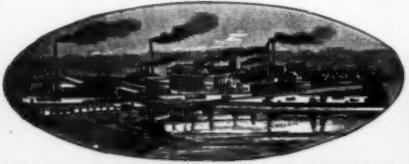
Buy and sell Bills of Exchange on Great Britain, Ireland, and other foreign points. Issue Commercial and Travelers' Credits in Sterling, Francs or Dollars, available in any part of the world. Make Telegraphic Transfers of Money between this and other countries. Make Collection on BROWN BROTHERS & CO., New York, Philadelphia and Boston.

of Drafts. Railroad, Municipal and other loans negotiated, and advances made on Cotton, Grain, Tobacco and other approved securities. Interest allowed on Deposits of Banks, Corporations and individuals. Members of Baltimore Stock Exchange. Buy and sell Stocks and Bonds in this and other cities. Private wire to Philadelphia and New York. BROWN, SHIPLEY & CO., London and Liverpool.

Washburn & Moen Mfg. Co., Worcester, Mass.

MAKERS OF IRON AND STEEL.

MANUFACTURERS OF



Iron, Steel and Copper Wire, Wire Rope, Barbed Wire.

Chicago Warehouse, 107 Lake Street.
New York Warehouse, 18, 21st Street.

Editor
The
of the
We are
This is
a num
ractio
the Ma
all other

Editor
Three m
this bri
of our
trade ha
affiliated

Editor
Many
closely
ting w
On Sa
Recor
the sp
and a
Board o
morning
letters
TURK
Before
more t
South C
Virginia
the we

Editor
We a
experi
only ha
reverte
You mi
tudy,

Editor
Manu
averag
a payin

Editor
We ar
advertis
communi
nation

Editor
We ar
factur
steel, i
the So
On MA

Manufacturers' Record.

PUBLISHED EVERY SATURDAY BY THE
MANUFACTURERS' RECORD CO.

R. H. EDMONDS, EDITOR.

OFFICE,

COR. EXCHANGE PLACE AND COMMERCE STREET
BALTIMORE.NEW YORK OFFICE:
Telephone Building, 18 Cortlandt St.

SUBSCRIPTION \$3.00 A YEAR.

BALTIMORE, MARCH 24, 1888.

WHAT ADVERTISERS SAY.

F. F. Adams Co., Manufacturers of
Patent Household Articles.

ERIE, PA., March 10, 1888.

Editor Manufacturers' Record:
The "ad." we have in your paper we consider one of the best investments we have made this year. We are receiving numerous enquiries from first-class houses, asking for catalogues and best cash prices. This is our second year with you, and we can trace a number of our orders direct to our "ad." in the RECORD. We have tried other papers who claim to reach the trade we are seeking, and have settled on the MANUFACTURERS' RECORD as being superior to all others for Southern trade. Yours truly,

THE F. F. ADAMS CO.

Cordesman Machine Co.—Wood-
Working Machinery.

CINCINNATI, O., January 30, 1888.

Editor Manufacturers' Record:
Our "ad." with your journal has been running but three months, but from the solid returns received in this brief time we are constrained to say that in none of our other contracts made to reach the Southern trade have we found the practical results yours has afforded us. Truly yours,

CORDESMAN MACHINE CO.

Office Board of Trade.

LOUISVILLE, KY., January 23, 1888.

Editor Manufacturers' Record:
If any testimony were needed to the value and efficiency of the MANUFACTURERS' RECORD as an advertising medium my own experience might furnish it. On Saturday, the 21st, the MANUFACTURERS' RECORD published a very complimentary notice of the splendidly-printed book, "The City of Louisville and a Glimpse of Kentucky," just issued by the Board of Trade here for free distribution. On Monday morning, when I reached my office, there were 18 letters awaiting me, each referring to the MANUFACTURERS' RECORD's notice and asking for a copy. Before night the number of letters had increased to more than 30. These letters were from Illinois, South Carolina, North Carolina, Alabama, Tennessee, Virginia and Indiana. I expect an avalanche during the week.

YOUNG E. ALLISON.

Ideal Manufacturing Co.

NEW HAVEN, CONN., January 18, 1888.

Editor Manufacturers' Record:
We are very much pleased with the result of our experimental advertisement in the RECORD. We only had four issues, every other week, and have received 53 bona fide enquiries from three issues. You may make out contract for one year. Yours truly,

J. H. BARLOW,

Manager Ideal Manufacturing Co.

F. F. Waters Manufacturing Co., Manufacturers of Smith's Patent
Friction Drill.

BOSTON, MASS., February 4, 1888.

Editor Manufacturers' Record:
It gives us pleasure to state that our "ad." in the MANUFACTURERS' RECORD has brought us, on the average, about 30 letters per month. We consider it a paying investment. Respectfully,

F. F. WATERS MFG. CO.

Cordesman, Meyer & Co., Manufacturers of Wood-Working
Machinery.

CINCINNATI, O., January 11, 1888.

Editor Manufacturers' Record:
We are highly pleased with the returns from our advertisement in your journal, and take pleasure in commending it to others in our line as a valuable medium for reaching the trade. Yours very truly,

CORDESMAN, MEYER & CO.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South, cannot find a better medium than the MANUFACTURERS' RECORD.

What Will Follow the Blizzard.

"Since the terrible storm at the West our office has had more than 90 letters from Minnesota and Dakota asking about North Carolina's climate." The above is a quotation from a private letter to the MANUFACTURERS' RECORD written by a gentlemen connected with the North Carolina Land & Immigration Bureau in New York. Doubtless the experience of that office has been repeated over and over again in all Southern agencies established at the North by individuals, corporations and cities for the purpose of giving information about their respective localities. The fact is that a severe winter pinch tests human endurance to such an extent that no one who has once gone through with it is willing to chance a like experience. It is altogether too great a risk, and when people find that they are in danger of being caught by a cold snap while pursuing their ordinary business, and of losing their lives in its pitiless embraces, the glamour of summer skies and golden wheat fields loses its power over them. They reason—"this may do for Siberians, Russians and Esquimaux, but not for us. What's the good of a glorious summer and an abundant harvest if we and our children and cattle are all liable to freeze to death when winter comes." Such thoughts cannot be suppressed.

The sufferings of women and children, the peril of all, count for far more with the average American who has a family than would all the gold that has been unearthed in California since the days of the "forty-niners." Our countrymen were styled by some writers not long ago "civilized nomads." To a certain extent this is true, for from the time the separatists planted their feet on Plymouth Rock, the Hollanders took possession of Manhattan Island, the colony of Lord Baltimore erected their first cross at the head of Chesapeake Bay, and Oglethorpe with his brave followers laid the foundations of Savannah, there has been a steady march toward the interior until the pioneers of civilization from all these Atlantic foundations crossed the backbone of the continent nor stopped their majestic march until they looked out upon the rolling surges of the broad Pacific. Those splendid States, whose teeming populations have conquered the blizzard stricken prairies of the Northwest and made them the granaries of the nation, have had their praises sung for a quarter of a century by land and immigration agents to such stirring tunes that tens of thousands of people whose physical conditions were entirely unsuited to the climate they were compelled to encounter have been added to their population. It is by many of these that the inquiries about the South are made. They cannot live in health and comfort where they are. They cannot endure the cold blasts and pelting snow storms

that annually visit their homes. What they need, what they will have if they can find it, is a healthful climate free from immoderate cold or heat. The South is the place for them. In that vast area, sparsely inhabited at present, that lies south of the Ohio, the Potomac and the Red rivers, there are millions of acres that exactly meet their needs. As fast as they acquire reliable information they, like the wandering Hebrews, send their representatives to "spy out the land," and then, when all they had been told is confirmed, they sell out at any sacrifice, and with their families and their effects, they start for the land of promise. The Northwestern blizzards have, during the last five years, it is estimated, sent more than 20,000 families into the Southern States.

But while this movement has been proceeding, accumulating size like a rolling snow-ball, that towards the West from Europe and the Eastern States has continued, gaining volume all the time. Horace Greeley's advice to young men—"go West!"—has lost none of its potency since his death. The glittering stories (founded on fact, but far surpassing any tale of fiction in wide departure from truth,) have been circulated in the North and in Europe by those who had great areas of land to sell, until they have been accepted as gospel truths by the uninformed, who were ignorant, (because there was no one to tell them,) that a brighter, a better, a more fruitful land existed, nearer to all the great centers of human activity on this continent, and endowed by nature with more varied charms and abounding resources than any other under the sun. And so the tide has rolled westward with steady flow from the Atlantic, while only a small reflow has set towards the South.

The great blizzard that swept along the coast last week, from Chesapeake to Massachusetts Bay, and then whirled across the ocean to spend its fury on the British isles, has set our Northern friends to thinking, "Is this the kind of thing they have out West every winter? If it is, we want none of it. One such experience is enough. Let us look South instead of West, and find, if we can, a home." Thousands, yes, tens of thousands, are saying this to themselves and to each other. The terrible storm of wind and snow that isolated New York from all the country, that stopped the Central and Pennsylvania railroads for days, that buried all Eastern Connecticut under drifts from which it has not yet entirely emerged, that demoralized commerce and finance, that destroyed scores of lives and crippled for life hundreds of people, has taught the whole country a lesson this generation will never forget. That lesson is that there are but two sections of the United States where such calamities can never occur. One is the narrow margin between the Cascade range and the Pacific Ocean, the other the group of States below Mason and Dixon's abolished line. The first is

far removed from home ties and the familiar associations of childhood; the other is but a day's journey distant. In those latter States there is everything the most enterprising could wish, or the cultivated desire. Nature has enriched them with all materials used in human industry, blessed them with a climate most genial and delightful, and placed them in such relations to the waterways and the sea, as well as to the great centers of population and wealth, that all living in them who will, may enjoy life and achieve prosperity.

What will follow the blizzard? That depends upon what the South, and the great railroad corporations whose lines traverse it, do. An immense number of people are wishing for the first time in their lives to know more about it, and to see it for themselves. Shall the information be given them, and also the opportunity to prospect in these fair States? What say you, Messrs. railroad managers? What say you, ye States and cities of the South?

WE commend to our readers the very interesting article in this issue on "The Manufacture of Cotton in the South," by Mr. D. A. Tompkins, of Charlotte, N. C. Mr. Tompkins always writes just to the point, and in this case he has given an admirable illustration of this fact. Briefly but directly he tells of the South's enterprise prior to the increase of slavery, how this institution gradually changed the character of the people in the matter of industrial progress, and then how quickly, with this incubus removed, the old-time energy has been aroused and what it is doing to develop the South. There are few men in the South who are in a better position to know its advantages for cotton manufacturing, and what he says on this subject is worth studying.

OUR Anniston correspondent calls attention to the advantages of giving more attention to building up small industries in that town as well as in the South generally. The MANUFACTURERS' RECORD has repeatedly urged the importance of this, and yet it cannot be referred to too often. The South must build up small industries. Atlanta aptly illustrates the remarkable results that follow a wide diversity of small enterprises. It is the number of its comparatively insignificant industries, the little shop or factory here, there and everywhere, and the wide range of its enterprises, that have built up Atlanta to be a great and prosperous city. Anniston, Birmingham, Decatur and every other Southern town will find that in many small factories there is a sounder basis of prosperity than in a few big enterprises. Diversify and build up small enterprises.

MR. W. E. STEWART, of Clanton, Ala., writes: "The MANUFACTURERS' RECORD is entitled to the thanks and support of all progressive Southerners, and the South's prosperity should be largely chargeable to your efforts. Long may it continue in its help, encouragement and success."

Southern Agricultural Prosperity.

A Correction of Misstatements Made by the Baltimore Sun.

For dense ignorance of the South, or else for the most wilful misrepresentation, the editorial columns of the Baltimore Sun will occasionally take the unquestioned leadership. Rarely has a more disgraceful attack upon the South been made, even by those who openly display their intense hatred of Southern prosperity—than an editorial in the Sun of last Thursday. Professing friendship for the South, the Sun has sent forth to the world the worst misrepresentation of that section that has disgraced any reputable journal for many a long day. What prompted it? Was it hatred of a protective tariff that would permit it to stoop to deliberate misrepresentation to uphold its arguments for free trade, or was it the denseness of its ignorance?

In an editorial on "The Real Condition of the South" the Sun draws a gloomy picture of the condition of that section. With a disregard of all honesty in presenting the case, it contrasts a few agricultural statistics of 1860 with those of 1880, and attempts to base on this an argument that the South is on the down road to ruin, utterly ignoring the gigantic losses of the war, which are estimated by Gen. Bradley T. Johnston in the way of "slaves emancipated, credits, stocks and property destroyed," etc., "as having entailed a money loss to the South of over \$6,000,000,000. With such stupendous losses, with a disorganized labor system, harassed by most unscrupulous legislative assemblies, it was not until but little over ten years ago that the South was really in a condition to begin to look to the future with any hope. And yet the Sun, taking the old figures of 1860 and those of 1880, draws its doleful picture of Southern ruin and says:

"The fact that the farms of the cotton States are in very many cases under heavy mortgages has recently attracted attention, but that is but one symptom of the embarrassment of that interest. Lands have decreased in value, labor is inefficient and capital is of slow growth."

After comparing the value of agricultural lands in 1860 and 1880 the Sun says:

"With this impoverishment one may expect the usual brood of evils—moral, political, social, educational and financial. In one county of Georgia, of more than the average prosperity, the record of deeds and mortgages per annum in 1860 filled about 60 pages; in 1886, 183 pages, not including, of course, mortgages of slaves, which found no place in the latter year."

And then it adds the following:

"The number of Southern youth receiving a good collegiate education is believed to be declining, and the education obtained in the public schools falls below the standard of the private schools of the earlier period. Politics is not on the same plane. The average intelligence of the voter having been greatly lowered by the enfranchisement of the slaves, a certain amount of demoralization has followed, and a portion of the

people are said to be in constant fear of social and political changes prejudicial to good order and the other interests of a property-holding community. There are portions, it is said, of the "Black Belt" where the whites are being displaced by the blacks, the former finding it impossible to make expenses with the inefficient labor at their command. There is even question in some minds whether the fate of Hayti and other once prosperous West Indian Islands is not in store for portions of the Black Belt. The demoralization and lowered intelligence of some of the people is well displayed, according to some observers, in the increased toleration they give, or appear to give, to 'protection,' which keeps them in the state of poverty to which they were reduced by the war."

And so the South, going down to ruin, which is proven because of "the increased toleration they give, or appear to give, to 'protection'" is in danger, or at least part of it, of "the fate of Hayti and other once prosperous West Indian Islands." In the very same column in which the South is thus pictured there is an editorial telling of the present condition of Hayti, and so the Sun's readers had the chance of learning just what "the fate of Hayti" has been. We are told cannibalism prevails to an alarming extent there, that children have been cut up and exposed for sale, and that these horrible practices are becoming so common as to be virtually by government consent.

Can the records of decent journalism in America point to a more disgraceful article than this? Has the South ever received a deeper stab from its bitterest enemy? And yet the Sun professes to be a friend of the South! All this was done simply to prove that a protective tariff was an injury to that section and that under protection Southern agricultural interests were steadily declining. We shall not discuss that point now. As the enemies of the South will take these misstatements of the Sun and use them to the injury of that section, we want simply to prove absolutely and beyond question that the South's agricultural interests are developing almost if not quite as rapidly as its manufactures, and thus prove that the Sun's statements were made either in absolute ignorance of the facts, or else that the condition of the South was purposely misrepresented.

It is worse than folly to use 1860 as a basis of any comparison for the most disastrous war in the world's history swept out of existence billions of dollars worth of property. The question is not what was the condition of the South prior to the war, but what is its condition to day as compared with five, ten or fifteen years ago? If it is going downwards, then something must be radically wrong, but if it is steadily advancing then it should have full credit for the progress already made from the direst poverty in which any country was ever left by war. Its industrial advance none can question.

Let us therefore compare its agricultural interests in 1870 and 1887, as

it is its agriculture of which the Sun draws such a dismal picture.

The production of leading crops in 1870 and 1887 in the South was:

| | 1887. | 1870. | Increase. |
|-------------------|-------------|-------------|-------------|
| Cotton, bales... | 6,800,000 | 3,021,996 | 37,88,004 |
| Corn, bushels... | 498,415,000 | 249,072,118 | 243,342,882 |
| Wheat, bushels... | 52,384,000 | 33,841,340 | 18,542,660 |
| Oats, bushels... | 81,506,000 | 31,973,549 | 49,532,458 |

From 3,000,000 bales of cotton in 1870, the South has advanced to 6,800,000 bales in 1887. Thus it has largely more than doubled its cotton crop. Better still it has increased its corn production from 249,000,000 bushels to 492,400,000 bushels, a gain of 243,000,000 bushels, or over 97 per cent., while in the rest of the country the gain was only 88 per cent. In wheat the South's increase was 18,542,000 bushels, or 54 per cent. against 62 per cent. for the rest of the country, and in oats the South gained from 31,973,000 bushels in 1870 to 81,506,000 in 1887, an increase of 49,532,000 bushels, or 155 per cent. against an increase of 130 per cent. for the balance of the country. Thus

the South, burdened by its awful weight of poverty entailed by the war, with a disorganized labor system, and without immigration, except to Texas, has, since 1870, largely more than doubled its cotton crop and made, surprising as it is, a much greater percentage of increase in the production of corn and oats than all the rest of the country, and very nearly as much in wheat. When we consider the poverty of the South at the start, and the lack of immigration, and contrast it with the wealth of the North and West, and the tremendous emigration to the agricultural regions of the West, this agricultural progress of the South is most astonishing. It is a monument to the energy of the people of that section.

To show that this progress has not been simply in one or two States, but is general, the following figures will prove of interest:

Yield of Corn in the South by States.

| | 1887. | 1870. |
|---------------------|-------------|-------------|
| | Bushels. | Bushels. |
| Maryland..... | 19,400,000 | 11,701,817 |
| Virginia..... | 37,080,000 | 17,649,301 |
| North Carolina..... | 33,820,000 | 18,542,315 |
| South Carolina..... | 15,613,000 | 7,614,907 |
| Georgia..... | 30,067,000 | 17,040,439 |
| Florida..... | 4,816,000 | 2,235,056 |
| Alabama..... | 33,582,000 | 16,9,794 |
| Mississippi..... | 30,633,000 | 15,17,316 |
| Louisiana..... | 18,082,000 | 7,590,638 |
| Texas..... | 76,490,000 | 20,554,53 |
| Arkansas..... | 41,367,000 | 13,328,145 |
| Tennessee..... | 75,804,000 | 41,343,614 |
| West Virginia..... | 12,316,000 | 8,197,865 |
| Kentucky..... | 57,840,000 | 30,991,006 |
| Total..... | 493,415,000 | 249,073,549 |

Total..... 493,415,000 249,073,549

There are but four States which do not show an increase of about 100 per cent. or more.

In oats the progress is equally as general, as the following figures show:

| | 1887. | 1870. |
|---------------------|------------|------------|
| | Bushels. | Bushels. |
| Maryland..... | 9,438,000 | 3,821,643 |
| Virginia..... | 11,095,000 | 6,857,535 |
| North Carolina..... | 8,504,000 | 3,200,105 |
| South Carolina..... | 4,677,000 | 613,593 |
| Georgia..... | 7,044,000 | 1,004,602 |
| Florida..... | 761,000 | 114,204 |
| Alabama..... | 4,643,000 | 770,866 |
| Mississippi..... | 4,410,000 | 414,586 |
| Louisiana..... | 498,000 | 17,782 |
| Texas..... | 12,703,000 | 562,663 |
| Arkansas..... | 4,710,000 | 588,777 |
| Tennessee..... | 9,235,000 | 4,513,335 |
| West Virginia..... | 8,537,000 | 9,413,749 |
| Kentucky..... | 8,847,000 | 6,690,243 |
| Total..... | 81,506,000 | 31,973,549 |

Total..... 81,506,000 31,973,549

Maryland shows a decrease in oats, but in Virginia there was a gain of 4,200,000 bushels, in North Carolina 5,200,000 bushels, in South Carolina 4,000,000 bushels, in Georgia 5,000,-

000 bushels, in Alabama 3,900,000 bushels, in Mississippi 4,000,000 bushels, in Texas 11,400,000 bushels, in Arkansas 4,200,000 bushels in Tennessee 4,700,000 bushels and in Kentucky 2,200,000 bushels.

While these great staples of cotton, corn, oats and wheat have doubled in production we all know that the smaller crops of fruits, vegetables, &c., which are now proving such a bonanza in many parts of the South, have made a still greater increase. In fact, as distinctive industries they have been almost entirely created since 1870.

While the productions of the farms have thus increased the live stock interests have likewise made a great advance, as very pointedly shown in the following figures:

The number of horses and mules in the South in 1887 and 1870 was as follows:

| | 1887. | 1870. | Horses. | Mules. |
|------------------|-----------|-----------|-----------|---------|
| | Horses. | Mules. | Horses. | Mules. |
| Maryland..... | 130,813 | 13,625 | 89,566 | 5,329 |
| Virginia..... | 243,319 | 35,726 | 152,864 | 10,304 |
| N. Carolina..... | 149,705 | 29,945 | 102,703 | 6,916 |
| S. Carolina..... | 65,566 | 75,451 | 44,105 | 3,979 |
| Georgia..... | 110,060 | 149,654 | 84,777 | 6,777 |
| Florida..... | 37,743 | 13,496 | 11,900 | 2,625 |
| Alabama..... | 130,813 | 13,625 | 80,770 | 5,329 |
| Mississippi..... | 134,065 | 150,548 | 90,221 | 6,916 |
| Louisiana..... | 110,810 | 14,478 | 50,778 | 3,625 |
| Texas..... | 1,281,503 | 193,488 | 424,504 | 30,609 |
| Arkansas..... | 179,955 | 22,457 | 94,013 | 5,308 |
| Tennessee..... | 302,964 | 194,771 | 147,454 | 11,400 |
| W. Virginia..... | 17,881 | 6,475 | 10,429 | 2,173 |
| Kentucky..... | 396,733 | 162,285 | 517,034 | 39,329 |
| Total..... | 3,351,876 | 1,438,094 | 1,885,155 | 130,366 |

Of milk cows, oxen and other cattle the number was as follows:

| | 1887. | 1870. | Milch Cows. | Oxen and other cattle. |
|------------------|-------------|------------------------|-------------|------------------------|
| | Milch Cows. | Oxen and other cattle. | Milch Cows. | Oxen and other cattle. |
| Maryland..... | 135,021 | 138,180 | 94,794 | 10,326 |
| Virginia..... | 257,793 | 493,761 | 185,471 | 18,549 |
| N. Carolina..... | 243,758 | 419,583 | 190,731 | 16,469 |
| S. Carolina..... | 146,195 | 212,521 | 98,993 | 10,609 |
| Georgia..... | 337,603 | 598,656 | 211,310 | 20,616 |
| Florida..... | 59,823 | 576,912 | 61,228 | 3,646 |
| Alabama..... | 266,787 | 545,139 | 195,540 | 20,616 |
| Mississippi..... | 85,004 | 248,029 | 173,999 | 20,616 |
| Louisiana..... | 160,640 | 270,815 | 100,076 | 13,181 |
| Texas..... | 772,716 | 6,336,504 | 426,488 | 3,646 |
| Arkansas..... | 304,404 | 460,057 | 120,529 | 12,677 |
| Tennessee..... | 339,579 | 617,239 | 143,197 | 10,400 |
| W. Virginia..... | 172,873 | 280,593 | 104,134 | 10,340 |
| Kentucky..... | 313,053 | 589,048 | 247,075 | 24,926 |
| Total..... | 3,820,450 | 11,590,980 | 8,470,780 | 8,616,676 |

The number of Hogs and Sheep were:

| | 1887. | 1870. | Hogs. | Hogs. |
|------------------|-----------|------------|-----------|------------|
| | Hogs. | Hogs. | Sheep. | Sheep. |
| Maryland..... | 160,454 | 151,397 | 189,967 | 170,326 |
| Virginia..... | 444,741 | 81,312 | 370,145 | 65,616 |
| N. Carolina..... | 107,334 | 550,166 | 184,593 | 106,315 |
| S. Carolina..... | 107,334 | 550,166 | 184,593 | 106,315 |
| Georgia..... | 445,182 | 1,534,182 | 419,653 | 316,515 |
| Florida..... | 98,888 | 307,051 | 26,599 | 18,866 |
| Alabama..... | 310,603 | 1,37,148 | 94,934 | 70,357 |
| Mississippi..... | 47,820 | 1,82,689 | 32,732 | 24,181 |
| Louisiana..... | 113,174 | 1,32,732 | 32,732 | 24,181 |
| Texas..... | 4,523,739 | 8,2,9,083 | 714,311 | 1,884,616 |
| Arkansas..... | 220,167 | 1,53,830 | 161,077 | 44,120 |
| Tennessee..... | 356,394 | 1,85,070 | 80,627,83 | 50,340 |
| W. Virginia..... | 474,933 | 432,778 | 55,287 | 40,609 |
| Kentucky..... | 797,998 | 1,71,173 | 93,676 | 1,03,640 |
| Total..... | 8,880,830 | 15,748,784 | 5,318,306 | 11,400,357 |

Summing up the figures we have:

| | 1887. | 1870. |
|----------------------------|------------|------------|
| Horses..... | 3,351,876 | 1,438,094 |
| Mules..... | 1,428,094 | 59,329 |
| Milch cows..... | 3,840,450 | 8,616,676 |
| Oxen and other cattle..... | 11,590,980 | 8,470,780 |
| Hogs..... | 15,748,784 | 11,400,357 |
| Sheep..... | 8,880,830 | 5,318,306 |
| Total..... | 44,830,978 | 40,354,078 |

These figures prove that Southern farming interests made a most astonishing increase between 1870 and 1887. To emphasize the continued progress in this direction let us make still another comparison and see how the agricultural productions of the South in 1879 and 1887 compare. This will show whether during the wonderful development of the industrial interests of the South farming has shared in the increasing prosperity or not.

The yield of principal crops in the South in 1879 and 1887 was as follows:

| | 1887. | 1879. | Increase. |
| --- | --- | --- | --- |

<tbl_r cells="4" ix="1" maxcspan="1" max

tonishing figures. An increase in the production of grain from 1879 to 1887 of over 195,000,000 bushels is decidedly a big advance, and but for the unprecedented drought in Kentucky, these figures would have been 30,000,000 or 35,000,000 bushels greater. How does this increase compare with the production in the balance of the country?

| | | |
|------------------------|---------------|---------------|
| Yield in whole country | 1879. | 1887. |
| Excepting South. | 1879. | 1887. |
| Corn, bush. | 963,746,000 | 1,214,700,500 |
| Wheat, bush. | 403,045,000 | 394,879,800 |
| Oats, bush. | 576,118,000 | 320,893,700 |
| Total. | 1,045,803,000 | 1,609,354,100 |

While the South, as shown by these figures, made an increase of 195,000,000 bushels of grain or 45 per cent, the increase in all the rest of the country was only 16,000,000 bushels, or less than one per cent. It is true that the West had a short corn crop, but so did Kentucky, one of the largest of the corn-producing States of the South, and moreover the West had an unusually large crop of oats, the largest, in fact, ever produced. But if we were to give the North and West the benefit of the large corn years of 1884, 1885 and 1886 and take as a comparison the average crop for 5 years, the rate of increase in grain production for the whole country excepting the South, from 1879 to 1887, would still be only about 12 per cent., against a 45 per cent. increase in the South.

A comparison of the yield of corn by States in the South in 1879 and 1887 will show how general was the advance:

| | | |
|----------------|-------------|-------------|
| | 1879. | 1887. |
| Maryland | 19,415,000 | 73,721,000 |
| Virginia | 37,680,000 | 19,957,600 |
| North Carolina | 35,890,000 | 55,765,500 |
| South Carolina | 15,013,000 | 9,708,000 |
| Georgia | 30,067,000 | 20,667,400 |
| Florida | 4,816,000 | 1,045,650 |
| Alabama | 33,522,000 | 25,403,300 |
| Mississippi | 32,631,000 | 44,096,400 |
| Louisiana | 18,022,000 | 19,592,500 |
| Texas | 76,400,000 | 29,168,500 |
| Arkansas | 41,367,000 | 23,432,800 |
| Tennessee | 75,204,000 | 50,807,500 |
| West Virginia | 12,5,6,000 | 11,308,600 |
| Kentucky | 57,840,000 | 64,736,00 |
| Total | 492,435,000 | 333,181,950 |

There was a very large increase in every State except Kentucky, where the crop was cut short by the unprecedented drought, the yield of corn in Kentucky in 1886 having been 88,000,000 bushels.

A comparison of the value of live stock in the South in 1879 and on January 1, 1888, will prove of interest:

| | |
|-----------------------|---------------|
| | Value. |
| Horses | \$191,629,208 |
| Hogs | 113,008,770 |
| Milk cows | 68,187,652 |
| Oven and other cattle | 130,741,481 |
| Sheep | 15,278,850 |
| Bees | 53,919,580 |
| Total | \$573,695,550 |
| Increase | \$182,513,296 |

That is a pretty healthy increase in the value of live stock between 1879 and 1888.

The total value of the chief agricultural products of the South (omitting sugar, rice, fruits and vegetables, &c., the value of which is not given in the United States Agricultural Department's reports) for 1887 and 1879 compares as follows:

| | | |
|------------------------------------|---------------|---------------|
| Cotton | \$310,000,000 | \$227,893,000 |
| Oil | 259,813,530 | 187,508,750 |
| Flax | 49,897,810 | 65,575,378 |
| Raisins | 34,055,190 | 20,193,612 |
| Raisins, barley, hay, tobacco, &c. | 95,000,000 | 69,478,313 |
| Total | \$548,066,460 | \$521,098,454 |
| Increase | \$17,000,000 | \$17,000,000 |

To these figures we add the in-

crease in fruits and vegetables, (Florida alone having developed her great orange and trucking business mainly since 1879) sugar, &c., the total gain in the value of agricultural products of the South in 1887 over 1879 was upwards of \$200,000,000, while during the same time the increase in the value of live stock was, as we have already shown, \$182,283,000.

We think that these figures, which have been compiled from official reports of the Department of Agriculture and the census, prove very conclusively that the South is making wonderful progress in agriculture.

Our Rivers and Harbors.

A great work has been done in the past for the improvement of many rivers and harbors of the United States, but much remains to be accomplished. Our commerce, both domestic and foreign, is greatly accelerated by our water-ways and seaports. The railroads traversing the land east of the Rocky Mountains are both collectors and distributors of the country's products, but they alone could not and never will be able to handle all the freight transportation of our ever increasing population. The Great Lakes, the Mississippi and its many large tributaries, the Hudson, and all the navigable streams pouring into the Atlantic and the Gulf of Mexico, bear upon their waters a traffic of vast consequence to the business of the nation. They are natural, while the railways are artificial highways. The first can be used by everybody, the latter only by those who have the money to pay for the accommodation. A multitude of causes may temporarily make rail ways useless, but the Southern rivers below the frost belt are always open to the people bordering their banks. Everything that the national government can do to render them safe, to open them to vessels of larger draft and capacity should be done, for not only their neighboring communities, but the entire people are benefitted by such public works. So in like measure, and for the same economic reasons, should there be liberal expenditures for improving lake and coast harbors. The Marine Journal of last week, referring to this subject, said:

"Captain William H. Bixby, Engineer U. S. A., in a recent letter full of interesting information on the advantages of improving Southern rivers as a means of opening up the country for settlement and developing its natural resources, gives some valuable and important facts touching the effects on commerce, agriculture and emigration. The rivers are easily rendered navigable, owing to the natural slope of the country, which insures cheaper freight and renders localities healthier, being better drained. Captain Bixby shows very clearly the gratifying results in the ratio of commerce, emigration and freight charges, of the money so far spent in the South, particularly in North and South Carolina, where towns have sprung up or increased in proportion by reason of the increased water-way facilities.

The South is a network of rivers, the North a network of railways. The river and the railroad constitute the two great means of communication and traffic in the

two sections of the country. The Government has aided the railways, now let it devise a system of improvement of water-ways under the direction of a bureau charged with the duty of keeping the rivers navigable, and thus increasing American population and communication. The South is too sparsely settled just now to admit of a network of railways, but she has ample means of communication and the transportation to market of her products if all of her rivers were kept in navigable order. A niggardly spirit in the matter of appropriations will not do. The doleing out, piecemeal, of small sum, which are hardly enough to begin work with, instead of enough to finish any one river, will not do either. What is wanted, is that the rivers should be thoroughly utilized as a means of transportation, and not left to the mercy of the elements, and the whole commerce of a section destroyed or stopped simply for want of a proper system of river improvements."

The MANUFACTURERS' RECORD heartily concurs in the foregoing view. The increased and increasing tonnage of the South makes it essential to her growth and prosperity that every seaport should be made as commodious and as safe as is possible to the highest engineering skill, and that every navigable river emptying into them should be developed to its fullest capacity. Anything less than this partakes of that wasteful economy so aptly described in the old saw—"saving at the tap and leaking at the bung hole." Away with this foolish and niggardly policy!

A MOST excellent opportunity is now afforded capitalists to build a hotel in a section whose climatic advantages, contiguous fine agricultural country, refined society and enterprising citizens would largely assist in making an investment of this character profitable. A hotel is wanted in Barnwell village, in the upper pine belt of South Carolina, and it is thought that a commodious building could be erected there and fully equipped for about \$35,000. Barnwell is situated about 100 miles from Charleston by rail and about 70 miles by sea, and so equable is its climate, snow seldom occurring in winter, and abundant and pure the water found there, and the odor from its pine forests possessed of such wonderful curative powers, as to ensure its being made a model sanitarium. The rigor of a Northern or Western winter has made it necessary for persons of weak constitutions, tendency to pulmonary diseases or throat troubles to find a warmer and more favorable climate—one in which both sunshine and air combine to thwart disease and restore lost vitality. Barnwell, it is believed, has such a climate, but lack of hotel accommodations has made it impossible for the many thousands of the afflicted to avail themselves of its health-renewing benefits. Further particulars as to Barnwell, &c., and the chance to build a hotel will be found in an advertisement in this issue.

THERE is no paper which watches so closely movements and signs in the South as the MANUFACTURERS' RECORD. Its eye covers the entire region and its finger is always on its throbbing pulse. The MANUFACTURERS' RECORD is better posted as to what is going on and what are the prospects in the South than any other authority. It has made itself familiar with the vast resources of our favored section, and it proclaims them from the housetop to the world. Its last number has a glowing article on the South's future, from which we cannot refrain to quote.—*Virginian*, Lynchburg, Va.

THE Water Valley Cotton Mills, of Mississippi, have recently declared a 28 per cent. dividend.

The Manufacture of Cotton in the South.

By D. A. TOMPKINS, Charlotte, N. C., for MANUFACTURERS' RECORD.

By a dispensation of Providence the South Atlantic and Gulf States have almost a monopoly in the production of cotton, not only in the United States but in all the world.

Create within these States as favorable conditions with which to surround the manufacture of cotton as exists at Fall River, Mass., or Manchester, England, and the South will become the greatest manufacturer as well as producer of cotton. The Southern manufacturer escapes at once paying profits to cotton buyers, freights, loss by handling, &c. What is wanted in the South is more accumulated capital and more skilled labor.

The conditions which have heretofore been supposed to be unfavorable to enterprise in the South are: 1. Indolence of character of the people. 2. A climate which produces such indolence. Careful observation will convince anyone that neither of the above ideas are correct. The condition of slavery, and that alone, checked a career of enterprise and development that had already been begun by the people of the South.

In the early days of this Republic the city of Charleston, S. C., had no superiors, if she had an equal, in matters of enterprise and industrial development. While other States were pattering over 10 to 20 miles of experimental railways, with a few carriages operated by horse-power, the people of South Carolina constructed 180 miles of railway from Charleston to Hamburg, and used in its operation the first locomotive ever used in this country. The introduction of cotton and the development of its growth as a feature of Southern agriculture stands itself a monument to the sagacity and enterprise of the men of that day. After the construction of the South Carolina railway, plans were at once laid for the construction of a railway from Charleston across the mountains to Cincinnati. Charleston was reaching out ahead of New York or Boston for the products of the West and Northwest. She had her ships upon the ocean and her bills of exchange were received in foreign markets besides those of London. There was no city in the Union but could learn something of enterprise and industry by the study of Charleston and her ways.

But apace with all the growth of the South the institution of slavery was also growing, and the falling off of the development of Southern resources may be observed to have kept pace with the growth of slavery. Finally the slave system became the ruling feature of Southern development, both as to character of her people and her industrial growth. Any pursuit which required intelligent labor was not popular with the master nor possible with the slave. While Hayne was employed in the effort to construct from Charleston the first trunk line ever projected to the West, his political colleague, Calhoun, was fastening firmer and firmer upon the South the system of slavery.

With slavery removed how quickly the former spirit of enterprise exhibits itself. As in earlier days cotton was introduced and made a successful feature of Southern agriculture, so now no sooner is the South free from the burden of slavery than the seed of the cotton is taken and changed from a waste product into a valuable farm product and raw material, from which are manufactured articles of commerce almost as numerous as those obtained from petroleum.

It was not the climate which stopped off a growth of enterprises once well begun in the South. It was the institution of slavery. As slavery grew stronger all else gave way before it, but no sooner is it

abolished than the South takes a new hold upon industrial development, which has been growing firmer and firmer as the effects of slavery have had time to die away. When the abolition of slavery was accomplished the results of Mr. Calhoun's greatest labors were swept away, and this is no more than done before Mr. Haynes' railway project is revived and the Charleston, Cincinnati & Chicago Railroad, practically over the same route, is in actual course of construction.

For the purposes of cotton manufacturing the climate of the South is all that can be desired; it is, in fact, better than that of Massachusetts. The Southern factory room in summer is no hotter than that of New England, and in winter the superiority of the conditions in the South will not admit of argument.

The present and only need of the South is skilled labor and capital. In both respects she is daily growing at home and gaining accessions from abroad. Cotton manufacturing has been most successful in those sections where the native population had formerly been most willing to work, and that is naturally where slavery had the least hold. In the Piedmont region of North and South Carolina cotton factories have grown, one after another in quick succession, and the labor has been drawn from the mountain sections of those States. Many a family now find more profitable employment in a new cotton factory on the foot hills than in making contraband whiskey higher up the mountain sides. In Georgia, the most democratic Southern State in anti-bellum days, cotton manufacturing has grown and is rapidly growing. In the coast cities, that grew wealthiest under the regime of slavery, the new development is naturally slowest to take permanent hold, and it is for this reason that we now and then hear from such places that the South is growing poorer. Whatever Southern city is heard to make this complaint is simply announcing that the effects of slavery are not yet quite gone and the complete reaction is not yet reached in that city. Nobody hears from Lynchburg, Charlotte, Atlanta, Birmingham, Memphis or Dallas that the South is growing poorer.

The disposition of the South towards industrial development under the slave system may be illustrated by the following incident. A gentleman named Gregg built a cotton factory at Graniterville. Although this factory was profitable and in every sense a success, Mr. Gregg's fellow-citizens exhibited no desire to promote any extension of cotton manufacturing. Mr. Gregg planted orchards of peach and apple trees and successfully raised these fruits. He became a candidate for the State senate and was opposed by a certain Mr. Carroll. Both spoke at political meetings and barbecues to large audiences, as was the custom in those days. Mr. Gregg called to the attention of his fellow citizens that he should receive their votes because he had spent his life in efforts that contributed to the welfare of the country as well as profit to himself. He had constructed a factory which gave employment to the poor. He had planted orchards and demonstrated that fruit could be successfully raised in the South and profitably sold to supply a demand in the early seasons at the North. Referring to his opponent he called attention to the fact that Mr. Carroll had never performed an act that contributed to the creation of any new idea or system for the benefit of his neighbors. He was born a slave owner, had become a lawyer and while he was essentially a gentleman he had never made two blades of grass grow where only one had grown before.

Mr. Carroll answered in a strain of exceeding good nature, spoke pleasantly of Mr. Gregg's energy and flatteringly of his

success in manufacturing cotton goods, but doubted the advantage to the county of anything which tended to develop a system of free labor to be maintained in immediate contact with slave labor. The tone of his speech was complimentary to Mr. Gregg, but he deprecated the industrial idea. He closed by saying Mr. Gregg had accused him of never making two blades of grass grow where only one grew before. He wanted to say that he had been persuaded by Mr. Gregg to plant an orchard of peach trees and if any body in the crowd would go look at that orchard he doubted if the peach trees could be seen for the grass he had grown about them. The crowd laughed and elected Mr. Carroll to the senate, but Mr. Gregg's anti-bellum factory stands to-day the nucleus of a large number which have been built since the war in the immediate vicinity. A large business has been likewise developed in shipping fruit to Northern markets from the county in which he lived. If that race had to be run in these post-bellum days it is more than probable Mr. Gregg would be elected.

The most important matter in locating a factory in the South is to so locate it as to get the benefit of the best labor now existing. Any of the large cities should furnish sufficient labor from the native population to operate a cotton factory. Possibly the best locations are in the older States and in sections where the number of slaves per capita of population was the least.

To recapitulate: In the early days of the nation, when slavery existed alike in the North and in the South, and before either section was well under its influence, the people of the South exhibited a spirit of enterprise fully equal if not superior to that of the people of the North. As the slave system grew upon the South this spirit of enterprise grew less, but no sooner is slavery abolished and its effects partly died away than the South promptly commences a career of industry where it was left off, and now the conditions are such that whoever can make a cotton factory successful in New England can make one doubly so in the South.

Freight on Southern Pig Iron.

The rates of freight on pig iron from Birmingham, Ala., and Chattanooga, Tenn., to points on and beyond the Ohio river, taking effect March 16, 1888, will be as follows:

| | From | |
|--------------------------|------------------|--------------------|
| To | Birmingham, Ala. | Chattanooga, Tenn. |
| Cincinnati, Ohio..... | \$3 25 | \$2 75 |
| Louisville, Ky..... | 3 00 | 2 75 |
| Jeffersonville, Ind..... | 3 25 | 3 00 |
| New Albany, Ind..... | 3 25 | 3 00 |
| Evansville, Ind..... | 3 25 | 3 00 |
| Memphis, Tenn..... | 2 50 | 2 50 |
| St. Louis, Mo..... | 3 50 | 3 50 |
| East St. Louis, Ill..... | 3 50 | 3 50 |
| Bellefontaine, Ill..... | 3 50 | 3 50 |
| Indianapolis, Ind..... | 3 75 | 3 50 |
| Terre Haute, Ind..... | 3 75 | 3 50 |
| Grand Crossing, Ill..... | 4 50 | 4 25 |
| Chicago, Ill..... | 4 50 | 4 25 |
| Pullman, Ill..... | 4 50 | 4 25 |
| Michigan City, Ind..... | 4 50 | 4 25 |
| Detroit, Mich..... | 4 50 | 4 25 |
| Toledo, Ohio..... | 4 50 | 4 00 |
| Peoria, Ill..... | 4 50 | 4 25 |
| Cleveland, Ohio..... | 4 50 | 4 00 |
| Sandusky, Ohio..... | 4 75 | 4 20 |
| Zanesville, Ohio..... | 4 50 | 4 00 |
| Columbus, Ohio..... | 4 00 | 3 50 |
| Greencastle, Ind..... | 4 25 | 4 00 |
| Dayton, Ohio..... | 4 00 | 3 50 |
| Springfield, Ohio..... | 4 00 | 3 50 |
| Lafayette, Ind..... | 4 25 | 4 00 |
| Miamisburg, Ohio..... | 4 05 | 3 55 |
| Ironton, Ohio..... | 4 05 | 4 00 |
| Akron, Ohio..... | 4 50 | 4 00 |
| South Bend, Ind..... | 4 50 | 4 25 |
| Pekin, Ill..... | 4 50 | 4 00 |
| Mattoon, Ill..... | 4 25 | 4 00 |
| Mansfield, Ohio..... | 4 50 | 4 00 |
| Newport, Ky..... | 3 25 | 2 75 |
| East Saginaw, Mich..... | 2 50 | 5 00 |
| Newark, Ohio..... | 4 40 | 3 90 |
| Lima, Ohio..... | 4 25 | 3 75 |
| Hamilton, Ohio..... | 3 25 | 3 45 |
| Hillsboro, Ohio..... | 4 00 | 3 50 |
| Aurora, Ind..... | 3 25 | 2 75 |
| Wayne, Ind..... | 4 25 | 4 00 |
| Joliet, Ill..... | 4 25 | 4 00 |
| Pittsburgh, Pa..... | 5 15 | 4 65 |
| Atlanta, Ill..... | 5 70 | 5 45 |
| Charleston, Ill..... | 4 50 | 4 25 |
| Danville, Ill..... | 4 50 | 4 25 |
| Gosport, Ind..... | 4 50 | 4 25 |
| Jacksonville, Ill..... | 5 00 | 4 75 |
| Vandalia, Ill..... | 4 50 | 4 25 |
| Allegheny, Pa..... | 5 15 | 4 65 |
| Wheeling, W. Va..... | 5 15 | 4 65 |
| Steubenville, Ohio..... | 5 15 | 4 65 |
| Bellire, Ohio..... | 5 15 | 4 65 |
| Bridgeport, Ohio..... | 5 15 | 4 65 |
| Wyandotte, Mich..... | 4 50 | 4 25 |

OUR ALABAMA LETTER.

Birmingham's Steel Enterprise and New Rolling Mill—Anniston's Gas Works—Contracts for 1,000 Houses and More to Follow.

[Special correspondence MANUFACTURERS' RECORD.]

ANNISTON, Ala., March 19, 1888.

The Birmingham people continue their rejoicing over the outcome of the Henderson experiments in steel making and if all the reports which are circulated possess any vestige of accuracy they have abundant cause for exultation. I am told that Mr. Henderson himself is having a small penknife made as a souvenir of the first run, and another Birmingham gentleman, Mr. Ensley, president of the Jefferson County Savings Bank, has had some razors made from the steel, which, it is claimed, will be of superior quality when properly tempered. A public experiment in making steel by this process is to be made in Birmingham this week. The company are exceedingly exuberant over the gratifying results of their experiments thus far, and have decided to increase their capital stock, enlarge the plant or build a new one. They will have little or no difficulty in effecting the desired enlargement of their capital, as the moneyed men of Birmingham have abiding faith in the process employed by Mr. Henderson.

The transplanting of the Nashville Rolling Mill to Birmingham will lock arms with the steel making industry and invigorate Birmingham's boom with renewed vitality. This stroke of policy is due to the far seeing wisdom of Dr. Caldwell, the president of the Elyton Land Co., who makes an out and-out purchase of the plant in behalf of the company. The mill is said to be practically new, and the machinery all of the most improved patterns. Two new gas furnaces are to be added, when its capacity will be about seventy tons per day. It will give employment to at least five hundred men, and, estimating that each man represents a family consisting of four, the increase of population afforded to Birmingham by this new plant will be two thousand souls. The men employed will receive from \$2 to \$5 per day, and the monthly pay-roll will be within the neighborhood of \$20,000. The system of "profit sharing" is to be used in this establishment. A pro rata share of the profits over and above a reasonable percentage on the capital stock will be divided, from time to time, among those employees who have remained steadily in the service of the company and who have also conducted themselves in a manner satisfactory to their employers. This experiment will be watched with considerable interest by the manufacturers of this section.

A franchise has just been granted by the city council to the New York Contract Co. to erect gas works and lay mains in Anniston. A contract between the city of Anniston and a party in Montgomery for street illumination was to take effect the 9th day of July, but this individual, not having taken advantage of his franchise, and seeing the approach of another company, came to Anniston and transferred his contract to the New York parties, who have purchased a site and have already started to work. They propose to furnish the city with a superior quality of coal gas, 16 candle-power, at a minimum cost, light to be turned on the 9th day of July next. A temporary organization of the Anniston Gas & Light Co. has been effected, and a permanent organization will take place in a short while. The capital stock of the company is \$50,000. The New York Contract Co. have recently completed gas works in Marshall, Texas, and Asheville, N. C.

Next to the lack of dwellings, Anniston's most serious want for the past year has been better street illumination, and the city has been called upon to pay for two or three damage cases where personal injury was sustained in the absence of proper illumination. This fault is now to be remedied, and within a few short months the Model City will be blaze of light, both of gas and electricity.

There promises to be unusual activity in building operations in Anniston this year. Contracts have already been placed for fully a thousand houses, and I hear every day of new contracts being placed. Notwithstanding, the demand for dwelling continues to be far in excess of the supply, and this condition bids fair to characterize the entire year. New people are moving in with startling rapidity, and the Inn and the Tavern are crowded all the time with prospectors. The cheap railroad rates, ably assisted by the recent blizzards of the North and West, have been the cause of sending here a large representation of people from New England and the Northwest, who naturally enough are delighted with our balmy climate. Among these visitors are some men of considerable means who may invest here in manufacturing enterprises.

Sheffield is busy perfecting her arrangements for the erection of a new blast furnace.

The Pioneer Glass Works at Gate City will shortly be ready to commence business.

The work on the Anniston Electric Street Railway is progressing rapidly, and cars are to be in operation within two weeks.

A gentleman has been prospecting in Anniston during the past week with the intention of locating a broom factory here. These small industries ought to be given more encouragement in the progressive towns of the South. They form the nucleus around which larger industrial plants eventually flourish. Anniston has been a busy building colossal iron pipe works, extensive new furnaces and other enterprises of like proportions that she has not paid the attention to smaller industries which has characterized some of her less favored rivals. We have no cigar factory here, and yet there is scarcely any other Southern town of any size but what can lay claim to having one or more of these small enterprises. A Baltimore manufacturer was here a few weeks ago examining Anniston as a location for an industry of this kind, but it is not known at what conclusion he arrived. Whether or not this party seizes the opportunity here presented to build up a cigar-making business, it would be well for others similarly interested to inspect the situation and be the first to enter a field that promises very satisfactory returns. EDWARD A. OLSDAN.

JUDGE BOND, the manager of the Decatur Land Improvement & Furnace Co., Decatur, Ala., writes us: "We have four hundred houses now under construction at this place. That is a pretty good evidence of what Decatur is doing."

THE MANUFACTURERS' RECORD, the brightest, newest and best of all the Southern trade papers, cuts a fine swell as it turns upon its thirteenth volume, filled to the brim with advertising and prosperity. We remember well when the way was not so smooth to them, but their efforts were in the right direction; there was push and energy, and well-directed energy always gets there. The MANUFACTURERS' RECORD has done much for the South. It has done much more to show the rest of the world what the South has done for itself. Both have profited by its existence and its work and neither has yet reached the zenith of its prosperity, in which we wish both God speed.—*Farm and Machinery*, St. Louis.

Heavy Buffing Lathe on Pedestal.

This lathe is designed for a heavy, strong, durable machine, weighing about 450 pounds. The spindle is 48 inches long, giving ample room to handle large pieces in any position and clear the frame. A 1/2-inch hole is tapped out at each end of

and perfectly balanced feed works, and the excellent arrangement of the large driving pulley on the mandrel, with its heavy third or outside bearing.

The handle arrangement of the quickly adjustable ripping fence and the manner of raising and lowering the feed arm for heavy and light material, and of swinging it round for clearing the table for cross-

self adjusting for unevenness of the lumber.

By raising it high enough for the roller to pass the vertical bar, shown on the right, on which it travels, the horizontal arm will swing off from the table, leaving it free for hand rip and cross cut sawing, mitering and beveling.

By means of the lever, shown in front near the corrugated hand wheel, the feed

double webbed housing, with three long bearings, which spans the frame on both sides. The journal boxes are planed and milled, carefully fitted and filled with our own make of babbitt metal, carefully scraped to a true bearing.

The mandrel is of such a length, provided with the necessary collars, that one or more saws may be used at the same time from 1/2 to 6 inches apart.

A spring shield is placed above the saw, which serves to hold the material firmly down, both before and behind, and also to prevent loose knots and splinters from flying back.

The machine is usually built with an iron table, as shown in the cut, but, when so ordered, a wooden table, consisting of joined strips of hardwood will be furnished.

The table is 5 feet long by 3 feet wide, and fitted with a recessed slide in front of the saw, for the reception of a sliding rip-board or an adjustable sliding fence for cross, mitering and bevel cutting. The latter is furnished only on special order.

The hand-wheel and radial braces, shown in front, are for sustaining the table at different heights, thus giving free access to the journal boxes.

The fence is accurately parallel in its adjustment, and is quickly set by the hand lever projecting over the table from a position directly back of the saw to 16 inches or less between the fence and saw. Any further information desired will be furnished by the manufacturers.

THE MANUFACTURERS' RECORD, of Baltimore, has completed its 12th volume. It is

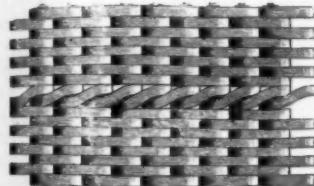


HEAVY BUFFING LATHE ON PEDESTAL.

Leather Link Belting.

Leather link belting is a comparatively new article in this country, having been introduced here some two years ago by Chas. A. Schieren & Co., of New York. It is made in the following manner: Small pieces of solid, selected leather are dressed with tallow and neats-foot oil; the leather is then put through rollers and made very solid; it is then cut into small links and joined together with steel bolts.

Formerly all leather link belts were made with one continuous bolt for each



AMERICAN PATENT JOINT.

width of belt, but the above firm have invented an ingenious method by which two bolts are used and joined in the center with small leather hinges (see illustration.) Belts made in this manner will conform to any pulley, whether flat, rounded or cone. Since this method has been invented these belts have been used everywhere with great success. They are specially adapted to running on centrifugal wool dryers, and it is said that all who have used them for that purpose pronounce them A1. These belts have met with great success so far, and many people claim that they will in time take the place of flat belting.

Wood-Working Machinery.

We illustrate herewith a new Universal self-feed rip saw machine made by the Bentel & Margedant Co., Hamilton, Ohio, which, from the accuracy and quickness of its work, and its adaptability for either power or hand feed, rip or cross-cut sawing and beveling, renders it a very valuable tool, particularly suited for planing mills, sub, door and blind, wagon and furniture factories, agricultural implement and car shops, or for any general sawing.

In order fully to exhibit the strength and simplicity of the parts of this machine and the superior construction of its feeding arrangement, we present illustrations from two points of view.

The cut shows the machine from the feeding end, giving a full view of the strong

cutting, are also accurately shown by this cut.

A noteworthy feature in the construction of the Universal self feed rip saw, to which especial attention is called is the fact that it does not employ any trouble some and noisy gang of gear wheels, and that only one belt is used to run the feed or change its speed.

This belt runs direct from the saw mandrel to the feed shaft, thus increasing or decreasing the speed of the feed as that of the saw changes.

The feed will raise or lower to admit material up to six inches in thickness, and is

can be started and stopped while the saw is in motion.

The pressure of the feed roll can also be regulated for heavy or light, hard or soft lumber, or the feed may be lifted entirely off of the material in an instant, while the saw is in motion to return the material.

The feed has four changes of speed, viz.: 50, 65, 80 and 100 feet per minute.

The path of the feed roll is in the line of the saw kerf, so there is no danger of marring the surface of planed material.

The saw mandrel is made of fine tool steel, with steady rings in one journal instead of grooves. It rests in a strong,

devoted, in a most intelligent way, to the development of the New South, presenting from week to week not only the latest news about industries in the various booming towns, but apt editorial comment. Its accurate foresight is one of the most remarkable of its specialties, and, with its weekly array of facts, makes it indispensable not only to the booming towns themselves, but to all people, North, East, South and West, who are concerned with investments or manufacturers' supplies. We are only too happy to add an expression of our appreciation of its achievements.—Evening Post, Hartford, Conn.



UNIVERSAL SELF-FEED RIP-SAW MACHINE.

A Lumber Stacker.

A labor-saving device of great value to lumbermen is illustrated by the accompanying cuts. In describing this lumber stacker the Northwestern Lumberman says:

"The first engraving shows the machine as it appears when beginning to stack a

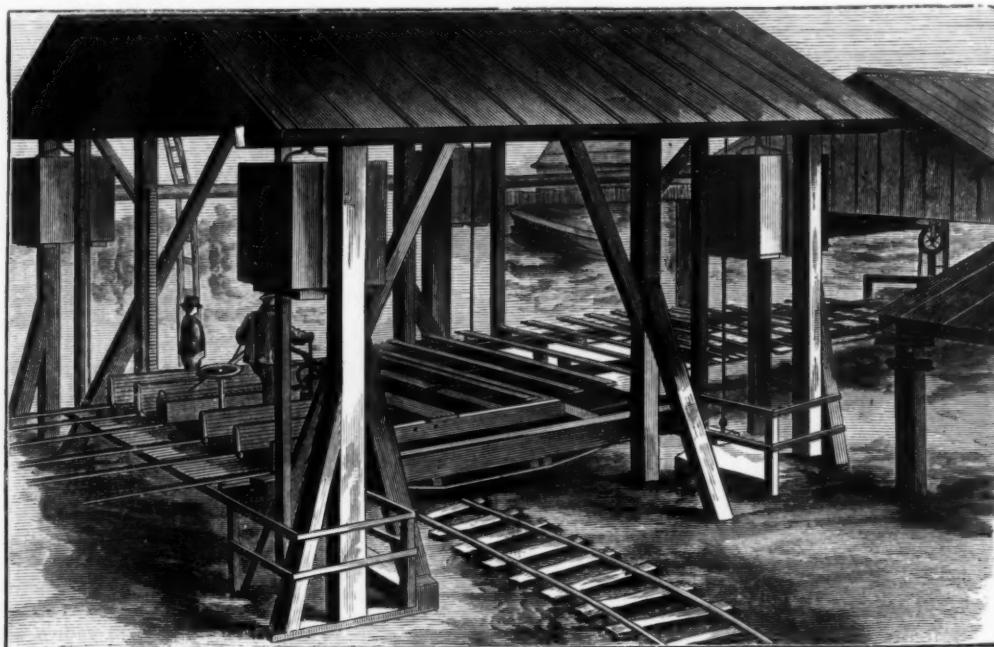
Marbury & Jones. This firm has made arrangements to manufacture the stacker, and is now ready to place it on the market. It asserts that during the time the machine has been in operation it has worked with uniform accuracy and satisfactory results. A new device can have no better recommendation than to be put on the market by a firm that has used it for 2½ years, and

ciding, the load is run into the kiln. The apparatus consists, first, of a strongly braced frame of perpendicular timbers. Inside of this frame is a vertically movable platform counter-balanced by the weights shown, and which is moved up automatically, and down by rack and pinion by the hand wheel back of the operator. On this platform is a carriage

chine. The chains drop the boards on depositing levers, which allow them at the proper time to drop upon the cross sticks. The carriage before moving away from trimmer side of the machine deposits the cross sticks, which are carried in pockets, kept filled by a boy. Each pocket holds 14 or 15 of them, and the pockets may vary in number according to how many cross sticks are desired. Reversing the motion of the carriage, and moving it toward the trimmer, the boards are deposited. Thus it will be seen that each movement of the carriage performs its separate task, and from the construction of the machine its work is mathematically exact.

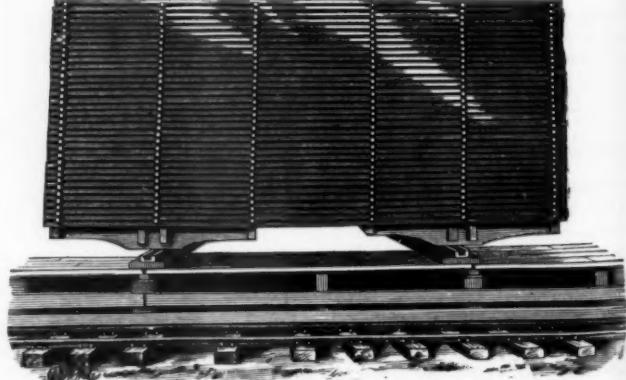
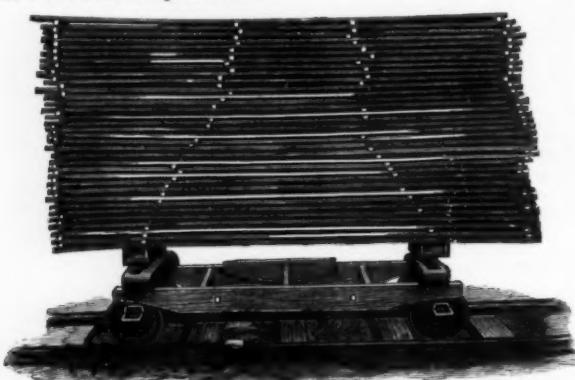
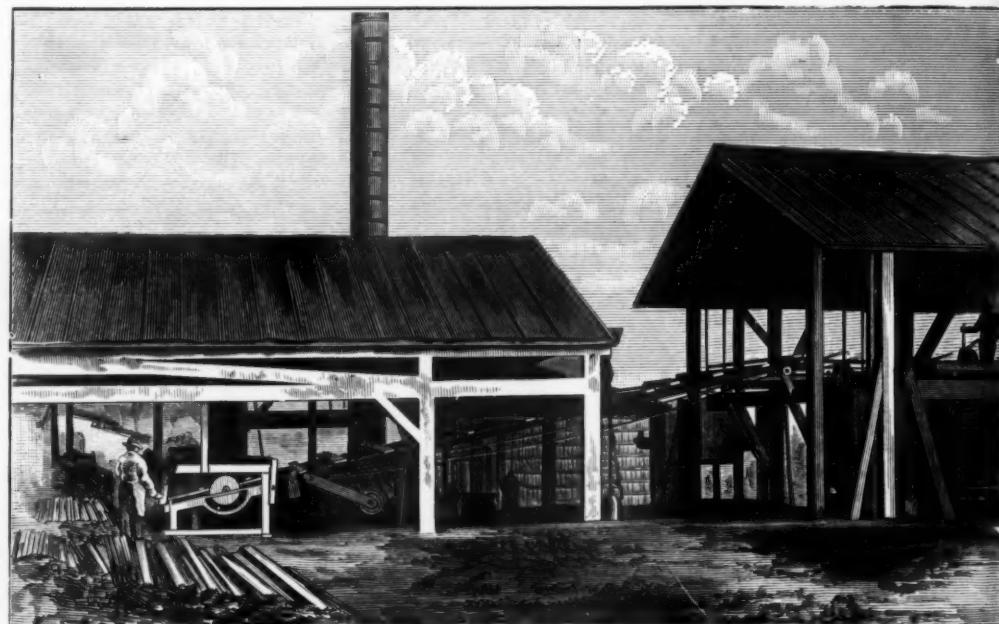
As each layer of cross sticks and boards is deposited, the platform rises to accommodate the next one, until the requisite height is gained, when the tram car is rolled away; another one substituted, the platform quickly lowered, and the work goes on. From the various operations performed the machine is necessarily somewhat complicated, but its parts are simple and not likely to get out of order. The several patents which have been taken out since the first one—the last one being dated September 7, 1886—have all covered improvements, designed to make the machine at once more simple and more positive in its work.

Marbury & Jones say that in their mill, large as it is, they have never been able to crowd the machine to its full capacity, but that they estimate its capacity at 100,000 feet of inch boards a day. The saving in labor is not the only merit. Lumber when



car of lumber; the second as it appears when the car is completed; the small picture at the left represents a car of lumber ready for the kiln as stacked by hand, and the one at the right a car as stacked by the machine. These engravings are reproductions from photographs, and as faithful representations as could be obtained. In so small engravings much of the detail is necessarily lost, but enough is shown to render a description intelligible.

Before giving a description of the machine it will be well to give something of the argument for it and its history. It is the invention of W. T. Smith, of the late lumber manufacturing firm of Smith & Marbury, Bozeman, Autauga county, Ala. Mr. Smith secured his first patent September 9, 1884, and for 2½ years the machine has been in constant use, stacking the entire cut of Smith & Marbury's mill, which is, as many of our readers know, one of the largest in the South. It has two circulars, and cuts 70,000 feet of yellow pine lumber daily. The machine stacks this cut for the dry kilns, of which there are six. Before the erection of this machine 15 men were employed exclusively in stacking lumber; now one man to operate the ma-



same reason on December 1, 1887, retired from his firm, selling his entire interest, chine and one boy to feed it with cross or spacing strips do all the work.

Owing to ill health Mr. Smith did not try to introduce his invention, and for the together with the machine, to T. L. Jones, of Montgomery, Ala., the new firm being

that consequently has faith enough in it to invest the large amount necessary to its manufacture. The machine is intended to stack lumber upon a kiln car, which in turn rests upon an ordinary tram car provided with cross tracks. Having been filled, it is rolled to the door of a kiln, and the rails on the car and in the kiln coin-

moved by a steam cylinder and piston controlled by a hand lever, like that of a steam feed.

The mechanism takes the boards as they leave the trimmer, the second engraving showing this plainly. They are carried by endless chains, which run on a way, one end of which rises or falls with the ma-

unevenly stacked suffers more or less damage; but by this machine, with the peculiar kiln cars used, as shown in one of the small engravings, the lumber piled perfectly true, so there can be no twisting or bending."

Subscribe to the Manufacturers' Record.

“ANNISTON



A Romance of the New South.”

Hon. Wm. D. Kelley,

THE GREAT PENNSYLVANIA STATESMAN,

After many weeks of careful investigation of the resources and advantages of the iron section of Alabama, lately wrote an exceedingly interesting article entitled “Anniston: A Romance of the New South.” In this article he gave an enthusiastic description of the growth of Anniston, widely known as “The Model City of the South,” and of its wonderful development and marvellous mineral wealth. Judge Kelley declares that Anniston is an

“IDEAL INDUSTRIAL CENTER,”

And says that “It is in many respects the most remarkable center of the iron industry in the Southern States.”



ANNISTON INN.

Anniston is beautifully located in the Alabama Mountains. It is surrounded by the *Most Marvellous Mineral Resources of the South, by Vast Forests of Virgin Timber and by a Magnificent Farming Country.* There are twelve Furnaces in the “Anniston Iron District,” (two of them making the celebrated “Woodstock Iron,” being within the city limits, and two more, to make Coke Iron, being under construction.) Anniston now has Three Banks, the Best Schools in the State, Fine Churches, Opera House, one



GRACE EPISCOPAL CHURCH.

of the Largest Cotton Mills in Alabama, Immense Car Wheel and Car Axle Works, Car Works, Rolling Mill, Machine Shops and Foundries, a large Steel Bloomery, the only one in the South, a 90-inch Morse Cotton Compress, immense Fire Brick Works, costing \$100,000, Planing Mills, &c., and is now building two Coke Furnaces, to turn out 2,100 tons of iron a week; Iron Pipe Works, the largest in the world, to employ 900 hands and consume 200 tons of pig iron a day; a \$60,000 Agricultural Implement Factory; Electric Street Railroad; a \$30,000 Union Depot, &c.

Manufacturers, Merchants and others desiring to locate in the best city in the South, where a solid and substantial growth is assured, are invited to visit Anniston or to write for pamphlets, &c., to the

THE UNITED STATES ROLLING STOCK COMPANY, OF NEW YORK, having a capital of \$4,000,000, are now building at Anniston

GIGANTIC CAR WORKS,

Including Rolling Mill, Foundry, Machine Shops, &c., to cost \$1,000,000, to employ 1,000 Skilled Mechanics, and to turn out 20 complete Cars a day, including freight, passenger, sleeping and parlor cars, everything, from making the wheels to the upholstering, to be done in these works. This is the most important industrial enterprise ever established in the South by Northern capital.

* THE ENTERPRISES *

Now under construction, and for the building and running of which every dollar has been raised, will require over 4,000 workmen in addition to those now here. The population, now 10,000, will be about 25,000 by the end of 1888. Great inducements offered to manufacturers to locate here.



ANNISTON INN—GRAND STAIRCASE.

OVER 100,000 ACRES

Of the Finest Iron Ore, Timber and Coal Lands in Alabama, including the great Cahaba Coal and Iron Property of 40,000 acres of the best Coking Coal in the South, are owned by Anniston capitalists, and are being developed in the interest of this town. These Lands, the New Furnaces, Pipe Works, Railroads to develop these properties, &c., HAVE ALL BEEN PAID FOR IN CASH, THERE BEING NO DEBTS OR BONDS TO ENCUMBER THESE GREAT ENTERPRISES. There are

SPLENDID OPENINGS HERE

for many industries, large and small, such as Cotton and Woolen Mills, Foundries and Machine Shops, Chain Works, Agricultural Implement Factories, Nail Mills, Wood-Working Establishments of all kinds, Brick and Tile Works, Flour and Corn Mill, &c., &c. Wholesale Dry Goods, Grocery and Hardware Houses are needed, and a large trade could be secured at once.

Contractors and Builders will find splendid opportunities for profitable investments in building dwellings, stores, &c. At least 2,000 new houses will be needed this year to accommodate the people to be brought here to operate the new enterprises under way, and others.

* ANNISTON'S CLIMATE *

Is Unsurpassed for Weak Lungs and Throats. It is dry and bracing, delightfully sunny and warm in winter, and cool, with never-failing breezes in summer. Its location in the mountains makes its summer climate a great attraction, and Northern people will find it cooler and more pleasant here than in their own homes. *Here are found Pure Air, Good Water, a Salubrious Climate, Absolute Freedom from Malaria, Well-Paved Streets and the Finest Hotel in the State, costing \$200,000.*

Anniston City Land Co.,

Anniston, Alabama.

FLORENCE, ALA.

County Seat of Lauderdale County.

At Head of Navigation on Tennessee River, and at Foot of Muscle Shoals Canal, which will be open Jan. 1st, 1888.

SITUATED on a gently undulating Plateau, 200 feet above high-water mark, surrounded by three large creeks of pure free-stone water. It has a Court House, Two Colleges, Four Public Schools, Six Churches, beautiful wide streets, graded and graveled, and shaded with forest trees; Hotels, fine store houses, Masonic, Odd Fellows, K. of H. and L. of H. lodges. A population of 2,500—moral, social and hospitable.

— The Scenery on Every Side is Picturesque and Beautiful. —

SO MUCH SO THAT IT IS CALLED BY VISITORS

FAIR FLORENCE.”

There is no Place on the Continent more Healthful and Salubrious.

MANUFACTURES.

Within the last six months numerous manufactures have been located here, among the number:

| | | | |
|----------------------------|--------------------------|-----------------------------|-------------------------|
| Five Large Blast Furnaces. | One Saw Mill, | One Cotton Mill, | Two Brick Machines and |
| One Rolling Mill, | One Flour Mill, | One Cotton Compress and Ice | Three Hand-Brick Yards. |
| Three Planing Mills, | One Wooden-Ware Factory. | Factory. | |

There are VAST BEDS OF IRON ORE within a few miles North and IMMENSE COAL FIELDS SOUTH

ACCESSIBLE BY RAILROADS NOW BEING RAPIDLY CONSTRUCTED.

By the 1st of January the Nashville & Florence Railroad will be completed, making three lines of railroad, and the river, thus opening up VAST AREAS OF TIMBER, IRON ORE, COAL, Marble, Limestone, Kaolin, Fire-Clay, and almost every kind of mineral and product.

THE LANDS IN THE SURROUNDING COUNTRY ARE FERTILE AND PRODUCTIVE.

All kinds of Grain, Grasses and Fruits grow to perfection. Springs and Water Courses are numerous, and grazing for Cattle is abundant for eight months of the year.

Pamphlets and maps furnished on application to

Florence Land, Mining & Manufacturing Company.

SHEFFIELD

COLBERT COUNTY, ALA.

The Iron Manufacturing Center of the South.

BEING at the *head of navigation*, and on the *south bank* of the Tennessee river, Sheffield is the *natural outlet* for the mineral and manufacturing products of Alabama and neighboring States seeking a water route to points on the Ohio and Mississippi rivers, and to the Gulf of Mexico, as well as the best *distributing point* over Alabama, Eastern Mississippi and East Tennessee, South Carolina, Georgia and Florida for Northern and Western produce, groceries, provisions, machinery, &c. *Four railroads* certain, and several others assured. *Principal shops of Memphis & Charleston Railroad* will be erected here pursuant to written contract. These will employ between *four hundred and five hundred mechanics*, and consequently, with their families, will make an increase in population of at least two thousand people. *Shops of three other railroads* are contracted to be located here.

* Five Blast Furnaces Now Under Construction, *

Of which one is nearly finished, and the remaining four contracted to completion next spring, have estimated capacity of 700 tons pig iron per day. This is 40 per cent. more than now manufactured at Birmingham, Alabama. Experts do not hesitate to say that *iron can be manufactured more cheaply* at Sheffield than at Birmingham, and its *river transportation facilities* will enable Sheffield iron to reach the principal markets at a saving of from

\$2.00 TO \$2.50 PER TON.

A first-class semi-weekly newspaper, printed by steam, is regularly issued. Furniture Factory, Bottling Works, Bakery, 3 Steam Brick Works, 2 Hand Brick Works, 2 Steam Wood-Working Establishments, Water Works, 2 Banks, a Savings Bank, and Steam Job Printing Office already in successful operation, and Iron Pipe Works, 15-ton Ice Machine and five-story hotel, with all modern appliances, will be erected. The Cleveland Hotel, Park House and numerous boarding houses furnish accommodations to travelers. Postoffice, Telegraph Office and Express Office already established. Contracts have been made for the early erection of Electric Light Works, Paint Works, Agricultural Implement and Machine Works and Cotton Compress. Large Stove Works, Machine Shops, additional Iron Blast Furnaces, an extensive Charcoal and Chemical Plant, a large Rolling Mill and other manufacturing establishments under consideration, and will probably be built shortly.

Good Water. Free Public Schools and Churches. Health and Climate Unsurpassed.

Drainage excellent. Splendid opening for men of push and energy. No "Old Fogey" element here. No better point for profitable investment.

Sites for Manufacturing Enterprises, And for Free Public Schools and Churches

Donated by Sheffield Land, Iron & Coal Company.

Population January 1st, 1887, 700; now, (August 21st, 1887,) by actual count, 2,583. Increase of population, 800 per cent. in eight months, and only limited by accommodations.

Three years ago the site of Sheffield was cultivated as corn and cotton plantations, and was without a railroad. Numerous two and three-story brick business houses, and one and two-story dwellings have been, and are being erected. The class of buildings will compare favorably with those in cities of 20,000 inhabitants.

LIMESTONE of excellent quality for *fluxing iron* in unlimited quantities at the furnaces' sites. First-class building stone and brick clay abundant. Rich and extensive deposits of *brown hematite iron ore* within twenty miles, along the lines of two Sheffield railroads. The Sheffield & Birmingham Railroad runs through the heart of the *Warrior Coal Fields*, which abound in first-class *coking, steam, gas and grate coal*. *Timber* is abundant and cheap.

The *Memphis & Charleston Railroad* and the *Sheffield & Birmingham Railroad* are now in operation into Sheffield. The *Louisville & Nashville Railroad Co.* is now extending its *Nashville, Florence and Sheffield* division, which will be completed to Sheffield before the close of the year 1887. Surveys of three other railroads have been recently completed to Sheffield, which will soon be the *best combined river and railroad transportation center* in the South.

Every merchant and every established manufacturing enterprise is doing a profitable business. *More are needed.* For further information address

ALFRED H. MOSES, Vice-Prest. and Manager

Sheffield Land, Iron & Coal Co., - Sheffield, Ala.

Tuscaloosa, Ala.

* ALABAMA'S NATURAL PITTSBURGH. *

A Railroad & River Town of 6,000 Inhabitants, in the Coal, Iron & Timber District.

DIPLOMAS FOR

The Best Furnace Coke and the Best Blacksmith Coal

WERE AWARDED THIS CITY OVER ALL AND MANY COMPETITORS AT THE GREAT PIEDMONT EXPOSITION.

HEALTHFUL LOCATION. SALUBRIOUS CLIMATE. SCHOOL FACILITIES UNEQUALED BY ANY OTHER TOWN IN THE SOUTH.

"EXAMINE THE MAP."

+ SITUATED ON +

Queen & Crescent

— TRUNK LINE, —

IN THE

Warrior Coal Field

AND ON THE

WARRIOR RIVER.

Only Navigable River touching the

Alabama Mineral Field.

Night Months Navigation. Being Surveyed now to be opened all the year round.

All Water Navigation to

♦ MOBILE ♦

AND THE

Entire Gulf and Atlantic Coasts.

THE

— Tuskaloosa Northern Railroad —

In now under construction into the

MINERAL & TIMBER FIELDS.

— THE —

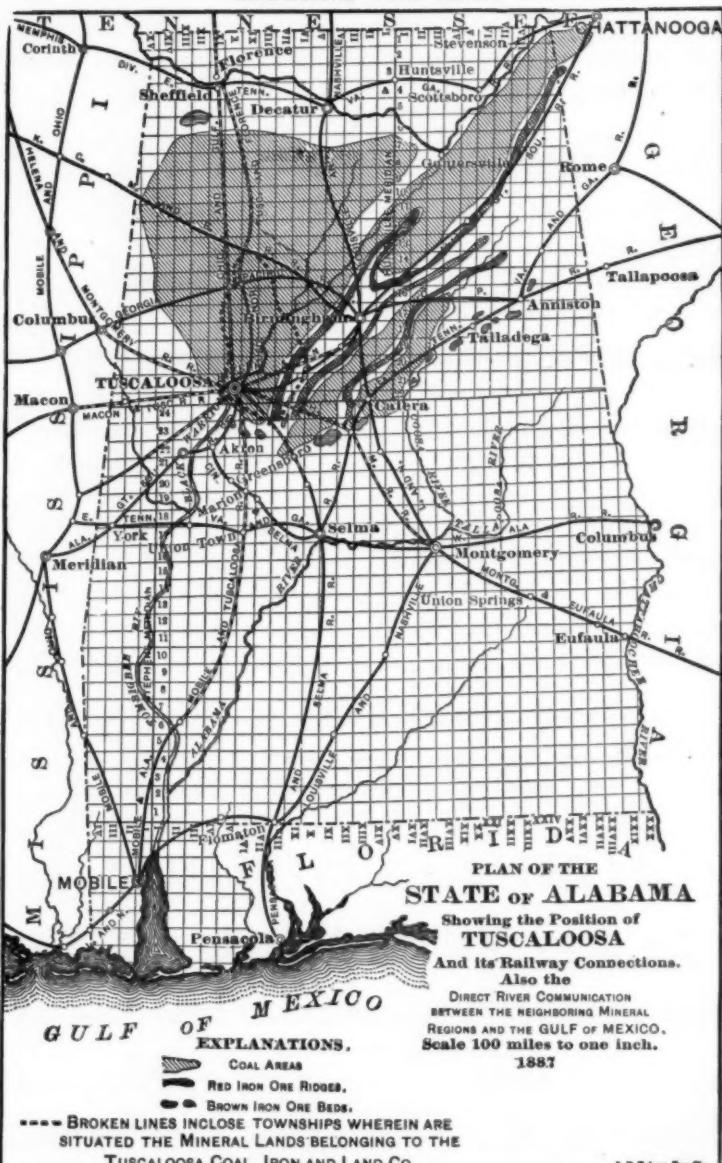
Macon & Tuskaloosa Railroad

Will soon be building into the

COTTON REGION OF MISSISSIPPI.

Fine Farming Region

Around and Below the City.



Superior Inducements

AND

+ ADVANTAGES +

TO ALL

Manufactories Consuming
WOOD, IRON, COTTON.

FINE COOKING COAL

In workable veins near city, fully tested.

♦ The Fire Clay ♦

Existing in inexhaustible quantities, has been practically tested and pronounced

The Best yet Discovered in the South.

The Tuskaloosa Belt Railway

NOW IN OPERATION.

♦ THE TUSCALOOSA WATER WORKS ♦

NOW BUILDING.

COTTON MILL

In Successful Operation.

ALSO

LARGE BRICK WORKS

COTTON-SEED OIL MILL, &c.

Manufacturers Seeking Locations in the South have here

♦ THE GOLDEN OPPORTUNITY. ♦

Many have availed themselves of it, but such is the wonderful richness of the resources of this section that there is

♦ ROOM FOR ALL. ♦

THE TUSCALOOSA COAL, IRON & LAND CO.

Owning 4,600 acres of city and suburban property, and 40,000 acres of mineral and timber lands, offers liberal inducements to manufacturers to locate at Tuskaloosa, Nature's City, and invites correspondence and the fullest investigation of its claims.

An illustrated descriptive pamphlet sent free upon application to

W. C. JEMISON,

President Tuskaloosa Coal, Iron & Land Co.,

TUSCALOOSA, ALA.

THE FREELAND DOUBLETREE AND SINGLETREE REGULATOR.

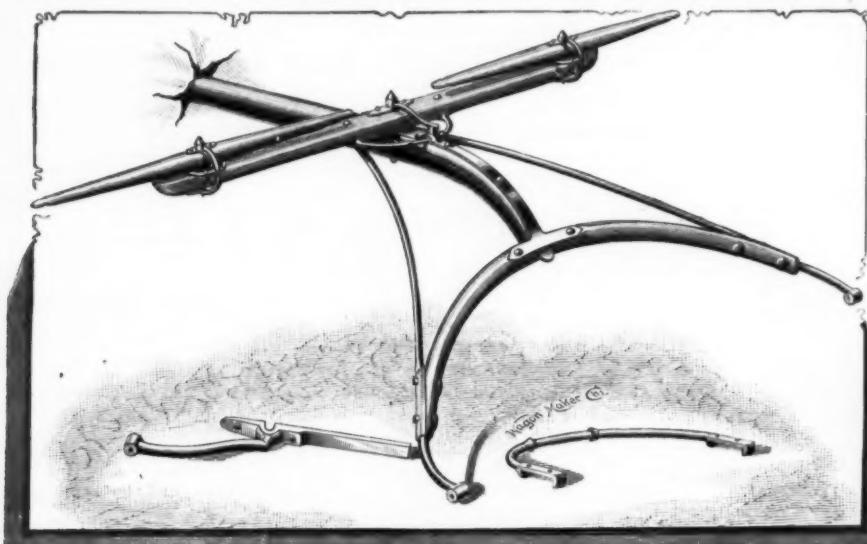
United States and European Patents
granted December 6, 1887.

We ask a careful examination of the "Freeland Doubletree and Singletree Regulator," upon which patents have just been issued. We claim it to be one of the most valuable, durable and cheap devices to which the attention of carriage manufacturers has been called. It is simple in construction and can readily be applied to Light and Heavy Single and Double Wagons, Sleighs, Mowers, Reapers, etc. For Double Carriages its use renders stay-straps unnecessary, holds the doubletree firmly in position, prevents rolling and rocking, at the same time relieving the bolt of strain, thus rendering it less liable to break. Should the bolt in doubletree break, this device holds doubletree firmly in place, thereby preventing accident. Should singletree break or trace unhook, the regulator controls action of doubletree, thereby preventing neck yoke from leaving the pole. For single carriages, wagons or sleighs it holds the singletree firmly in position, preventing it from rolling or rocking, the same as in double carriages; the strain being taken off the bolt, dispensing with the use of stay straps. In the event of a trace unhooking the horse is prevented leaving the thills. For two horse wagons extra heavy irons are made, with heavy clevis combined, and so constructed that by drawing the hammer the doubletree can easily be removed. The doubletrees are provided with clevis ready for use with chain, after removal. For Mowers and Reapers—it prevents the horses from being pulled back on cutting bars, and is of great assistance in

turning corners by removing strain from end of pole, thus preventing it from breaking. It possesses great advantages over ordinary fastenings in point of strength, utility, safety and cheapness. Manufacturers of wagons and agricultural implements who have seen the Regulator, agree with us as to its superior advantages, and consider it only a question of time when it shall come into general use. The irons can easily be applied to old as well as new work, either by farmer or mechanic. We feel confident all will agree with us that the Regulator is worth all it costs for either of the following reasons: 1st. It holds doubletree and singletree firmly in position—no rolling or rocking. 2d. By its use stay straps and chains are rendered unnecessary. 3d. It prevents accident by reason of stay strap breaking. 4th. It prevents accident in event of bolts breaking. 5th. It imparts elegance to appearance of carriages. 6th. The general utility of Regulator.

PRICE LIST: No. 1, for light two-horse carriage, made of Norway iron, \$1.25; No. 2, for light two-horse carriages, part malleable and part Norway iron, \$1; No. 3, same as No. 2, full set for doubletree and singletree, nickel plated, \$2.50; No. 4, for two-horse carriages and platform spring wagons, Norway iron, \$1.25; No. 5, same as No. 4, with hammer-strap of malleable iron, \$1; No. 6, same as No. 5, full set, nickel plated, \$2.50; No. 7, for heavy two-horse wagons, with clevis attached, \$1.25; No. 8, for mowers, reapers, etc., \$1.25; No. 9, Regulator for single carriage, plain, 30 cents; No. 10, same as No. 9, nickel plated, 75 cents. On receipt of price we will ship samples of any or all of the above irons, and if not what they are represented, the purchaser may retain the irons and we will refund the money. A liberal discount will be made to the trade. Irons will be ready for shipment by the middle of January. For further particulars address

FREELAND & BRADLEY, Sole Manufacturers, Wellsville, Alleghany County, N. Y.



THE Sigourney Tool Co.
HARTFORD, CONN.

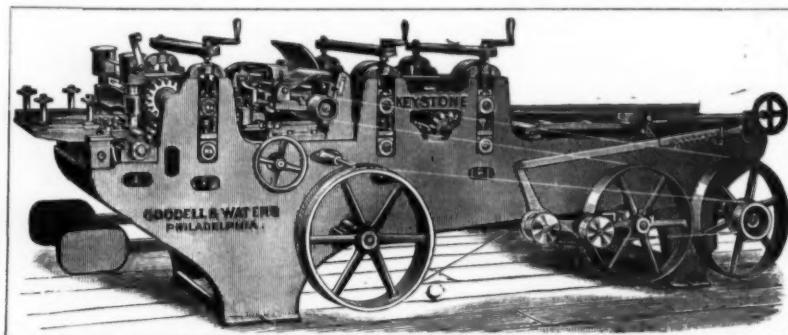


One, Two and Three
Sensitive,
STRONG
—AND—
DRILLS.

MANUFACTURERS
Special Machinery, Tools, Models, &c.
Built by Day or Contract.

"KEYSTONE"

Rapid Feed Flooring Machine.



SEND FOR DESCRIPTIVE CIRCULAR AND PRICES.

GOODELL & WATERS, Manufacturers,

WESTERN WAREROOMS:

11 and 13 S. Canal Street,

CHICAGO, ILL.

MR. C. L. RICE, MANAGER.

3002 Chestnut Street,

PHILADELPHIA.

Buy "THE NEW SOUTH."

HANSDOMELY BOUND
IN CLOTH. PRICE, \$2.50.

MANUFACTURERS' RECORD CO. Publishers Baltimore Maryland.



Keep Your Belts From Slipping

And save your power
by using

FRICITION COVERING FOR PULLEYS.

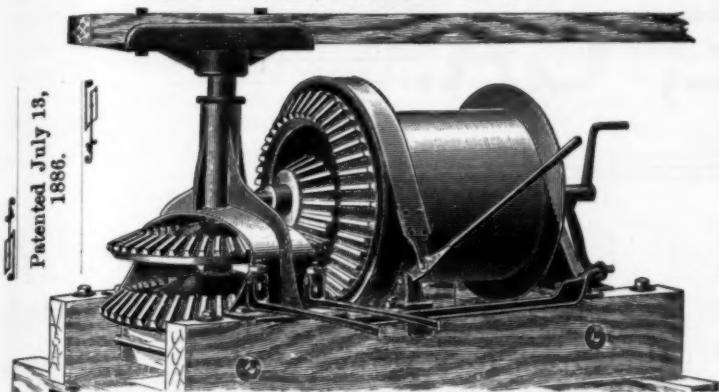
Satisfaction Guaranteed.
Easily Applied.
No Rivets. Effective.

National Pulley Covering Co.

BALTIMORE, MD.

THE CONTRACTORS' PLANT MANFG. CO.

129 ERIE STREET, BUFFALO, N. Y., U. S. A.



Patented July 18,
1886.

This cut illustrates our latest Improved Horse Power Hoisting Machine. This machine has a combination of fast and slow speed. With the fast speed a horse will lift 1,600 to 2,000 lbs. on a single line at a speed of 60 feet per minute, and with a single block 3,500 lbs. 40 feet per minute. With the slow speed a weight of 1/2 ton with a single line, and with a single block 3 tons; with two single blocks 5 tons; with double and single blocks 7 tons. The speed single line 30 feet per minute, with single block 15 feet per minute.

In this combination of gears the user has the advantage of two machines embraced in one, with a saving of 25 per cent. in cost and 50 per cent. in weight.

The machine is so simple in its construction that it can be easily understood without explanation. The changing of the speed is done in an instant by simply raising or lowering a lever to the left of the machine without being obliged to stop the horse. With the powerful brake and automatic safety attachment, and with the strength and durability, together with the lightness of this machine, we think we have accomplished a purpose which will be appreciated by our customers, and give us a ready sale of this machine. Price \$100 net.

We Also Manufacture Horse-Power Hoist for Railway Contractors,
Bridge Builders and Quarrymen.

Correspondence Solicited. Illustrated Catalogue furnished on application. Mention this paper when you write.

EWART'S PATENT CHAIN BELTING

LINK BELT MACHINERY.

Elevating and Conveying Machinery.

EMPLOYING EWART CHAIN.

For Coal, Phosphate, Tan, Ore, Stone, &c.

BURR & DODGE,
39 S. Holliday Street,
BALTIMORE, MD.

Link Belt Machinery Co., Chicago, Ill.

125 and 126 N. 5th Street, Philadelphia, Pa.
Send for new catalogue, containing all the latest improvements in Elevators and Conveyors.



R. SWORMSTEDT & CO.

MILL FURNISHERS

MANUFACTURERS' AGENT FOR THE
Steel Key Detachable Link Belting,
For ELEVATORS, CONVEYORS and TRANSMISSION of POWER.

Shafting, Pulleys and Hangers a Specialty.

OFFICE AND WAREHOUSE:
No. 11 S. FREDERICK STREET, BALTIMORE, MD.

MILL STONES
—AND—
BOLTING CLOTHS

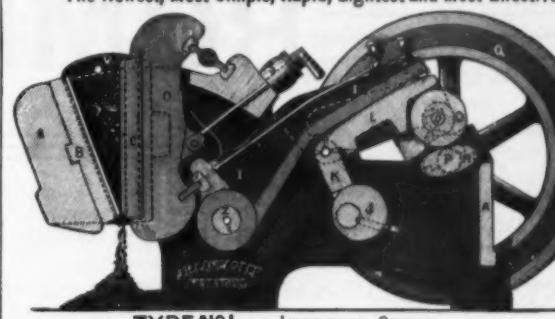




Baltimore Mill Furnishing Works,
Manufacturers of
MILL STONES, ROLLER MILLS, PORTABLE MILLS, PULLEYS,
SHAFTING, and MILL GEARING.
Importers of
BOLTING CLOTHS, and GENERAL MILL FURNISHERS.
B. F. STARR & CO.
North and Center Sts., Baltimore.

The "LANCASTER" ROCK BREAKER AND ORE CRUSHER,

The Newest, Most Simple, Rapid, Lightest and Most Effective Crusher Extant.



Adjustable wheel running to yield any uniform grades of product.

Less power required and less liability to breakage, and less in first cost and in subsequent wear and tear, than any other machine for which such advantages are being claimed.

Competitive trials and tests solicited.

The "Lancaster" Crushers may be mounted on wheels, worked by hand, horse-gear, steam or other power, and also fitted with Rotary

JAS. H. LANCASTER, 187 Broadway, New York,
Sole Maker of the "Lancaster" Hand and Power Coal Wedging and Coal Drilling Machines.

BUCYRUS FOUNDRY & MFG. CO.

BUCYRUS, OHIO.

Builders of

Steam Shovels,

Steam Dredges,

WRECKING CARS.

EMPIRE CITY PULVERIZING MILLS.

For Coffee, Ginger and other roots, Spices, Chemicals, &c.

TO ANY DEGREE OF FINENESS.

Also Grains of all kind, Bar Corn, Beans, Peas, etc.

J. B. WARING & SONS, 106 & 108 Liberty Street, N. Y.
Complete Pulverizing Plants Furnished.

DAVIDS' PATENT DISINTEGRATING MILL

For Bones, Phosphates, Tankage, Ores, Clay, Fish Scrap, Salt Cake, &c.
Fertilizer Machinery, Mixers' Rolls, Breakers, &c., &c. Marine
Railways, Clay Temperers. Send for Catalogue.

JAMES MURRAY & SON, 102 to 108 York Street, Baltimore, Md.

South Pittsburg Pipe Works.

Geo. E. Downing, Pres. JAMES BROWNE, Vice-Pres. Dr. W. R. Townsend, Secy.

Manufacturers of

South Pittsburg, Tenn.

CAST IRON GAS & WATER PIPE.
WARREN WOOD & CO.
115 Broadway, N. Y.
EASTERN AGENTS.

CHATTANOOGA FOUNDRY & PIPE WORKS.

DAVID GILES, Pres. C. B. IBESTER, Vice-Pres. M. LLEWELLYN, Secy. and Treas.
Successors to D. GILES & CO., Chattanooga, Tenn., Manufacturers of

Also Castings and Patterns of Every Description made to order.

Record Printing House,

Fine Cut Work
A Specialty.
Cor. Exchange Place
and Commerce St.

THE

Rome Land Company

ROME, GA.

OF all the growing cities in the growing South, Rome presents the greatest opening for money-making investments, with surrounding fields as rich as the lands of Goshen, with exhaustless deposits of brown and red Iron Ores and Manganese immediately at hand on all sides, with mountains of Marble and Limestone coming right up to the city, with an abundance of the best Coal easy of access, areas of untouched forests, and with seven railroad outlets and two navigable rivers, Rome stands, in natural advantages, pre-eminently above any other proud and pretentious city within the limits of this proud and ambitious commonwealth.

The HEALTH OF ROME is unsurpassed. The unusually low death rate is a phenomenon, standing without a peer at 8.40 per thousand. Not one case of catarrh or consumption exists or ever originated within her limits.

Rome has 12,000 inhabitants, has invested in colleges and school buildings about \$300,000; in church building over \$100,000; in her new hotel \$125,000; in the dummy line, just completed, over \$50,000. Her manufactories employ 800 hands, with other enterprises now going up. Her system of water-works and sewerage is unsurpassed. The city is lighted with gas, and negotiations for an electric light plant are now pending. The highways leading to the city are all well macadamized. The Post-office Department has recently made Rome a free postal delivery office. The annual business of the city is about \$12,000,000, with the trade constantly increasing. The yearly range of temperature at Rome, between the average highest and lowest, is about 84 degrees; the mean temperature is 60.6 degrees. About seven months intervene between the first and the last killing frosts of the year. There is no better society to be found anywhere.

The Rome Land Company (J. W. Rounsville, President, T. F. Howell, Treasurer, and J. L. Bass, Secretary and Business Manager) will donate ample grounds to, and otherwise aid, any worthy manufacturing enterprise that may locate here.

Send for circulars and pamphlets.

THE ROME LAND CO., ROME, GA.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

ALABAMA.

Anniston—Gas Works.—T. Gardner Foster, of Montgomery, previously reported as to build gas works, will, in connection with the New York Contract Co., of New York City, build works to cost \$50,000. They have purchased a site and will build works at once, and expect to have them in operation by August 15. A company has been formed with Julius Lipman as president.

Anniston—Carriage Factory.—Theodore Pruden, of Eufaula, has been prospecting for a site for a wagon factory.

Anniston—Buildings.—Mr. Weathers is preparing plans for several two-story buildings to be erected by the Anniston City Land Co., and for three residences to be built by Max Wellborn.

Avonale—Opera House.—H. Scholtz will rebuild his opera house, reported this week as burned.

Bessemer—Foundry and Machine Shop.—C. Townsend, of Beaufort, S. C., reported last week as prospecting for a site for a foundry and machine shop, will be interested in a company which is being formed to build the works.

Bessemer—Ice Factory.—The Bessemer Ice & Cold Storage Co. have purchased machinery to erect a 5-ton ice factory.

Birmingham—C. J. Winn, of St. Louis, Mo., contemplates starting the manufacture of a boiler compound.

Birmingham—Buildings.—Mr. Gilreath has commenced work on a large four-story building for J. F. B. Jackson. W. E. Bates will erect two large store buildings.

Birmingham—Steel Works.—The Henderson Steel & Manufacturing Co. will hold a meeting on April 24 to increase their capital stock for the purpose of enlarging their plant or building a new one. The capital will be increased to probably \$250,000 or more.

Birmingham—Railroad.—The East Birmingham Railroad is reported to be extended to Gate City.

Birmingham—Printing.—H. M. Caldwell, John M. Caldwell and Charles H. Caldwell have incorporated the Caldwell Printing Co., capital stock \$100,000, to operate the Caldwell Printing Works.

Birmingham—Residence.—Major Whelock is preparing plans for a residence to be erected by B. F. Roden at a cost of \$25,000.

Birmingham—Tack Works.—The Birmingham Tack Works, C. B. Russell, superintendent, will greatly increase their capacity and start the manufacture of kegs if the steel made by the Henderson process proves satisfactory as to quality and price.

Birmingham—Railroad.—J. M. Worthington & Co., reported last week, have the contract for building 27 miles of the Huntsville branch of the Birmingham Mineral Railroad, (L. & N.) and about 13 miles of the Trussville branch.

Birmingham—Stove Works.—The Baxter Stove & Manufacturing Co. will put in an additional cupola, &c.

Birmingham—Depot.—The Columbus & Western Railroad Co. (office, Columbus, Ga.) are receiving bids for building their freight depot previously reported. It is to be 50x300 feet.

Birmingham—Rolling Mill.—The Elyton Land Co. are removing the rolling mill from Nashville, Tenn., to Birmingham, reported last week. They will build a number of houses for the employees.

Birmingham—Pipe Works.—T. S. Mabin, of New York, is forming a company to manufacture pipe on a large scale.

Childersburg—Saw and Planing Mill.—W. W. Lambert, of Nottingham, and J. S. Blackburn will erect a saw and planing mill, to be in operation by April 15.

Courtland—Saw Mill.—Mr. Harris is reported as to build a saw mill.

Decatur—Rail Mill.—It is stated that the North Chicago Rolling Mill Co., of Chicago, Ill., will build a large rail mill at Decatur if the Henderson process of manufacturing steel proves practicable.

Decatur—Houses.—H. C. Spring, W. W. Hedges and W. W. Littlejohn have incorporated the St. Louis Investment Co., capital stock \$200,000, to build houses.

Decatur—Furniture Factory.—The Union Furniture Co. have enlarged their factory.

Decatur—Hotel.—A hotel to cost \$500,000 is reported to be built during this year. The Decatur Land, Improvement & Furnace Co. can give particulars.

Decatur—The Decatur Wheelbarrow Co. are building an addition to their factory, three stories, 34x35 feet. It will be used for manufacturing office furniture.

Decatur—Planing Mill.—The Decatur Supply Co., previously reported, have commenced work on a planing mill.

Edwardsville—Mica Mines.—It is reported that a \$60,000 company has been organized to develop mica mines in Cleburne county, with F. M. Kellogg as president.

Fayette C. H.—Saw Mill.—I. Seymour & Sons have purchased machinery for a saw mill.

Gadsden—Railroad.—The Tennessee & Coosa Railroad Co. are making surveys for the extension of their road to Guntersville, lately mentioned.

Geneva—Timber Lands.—W. C. Yawkey, of Michigan, has purchased 10,000 acres of timber lands near Geneva.

Girard (P. O., Columbus, Ga.)—Knitting Factory.—The Girard Knitting Factory is being enlarged to double the present capacity.

Greenville—Guano Factory.—A guano factory is reported to be started. If correct J. L. Long can give particulars.

Greenville—Brick yard.—J. L. Long will, it is said, start the brick-yard lately mentioned.

Hartselle—Oil Lands.—Northern parties have leased about 5,000 acres of land, and optioned other lands for the purpose of prospecting for oil.

Irondale—Mining.—T. S. McDaniel will organize a stock company to develop mineral lands in North Georgia.

Jasper—Coal Lands.—F. M. Ganable has sold his Townley coal property to the Sheffield & Birmingham Coal, Iron & Railroad Co., of Sheffield. It will be developed.

Montgomery—Brewery.—It is reported that the Alabama Fertilizer Co. will move their works to Riverside, and that a brewery will be established in the buildings to be vacated by them.

Montgomery—Cotton Factory.—Davis Bros. have contracted to build an addition to the Adams Cotton Factory, and erect an office building.

Selma—Machine Shops.—The East Tennessee, Virginia & Georgia Railroad Co. will shortly add machinery to their machine shops to increase capacity.

Sheffield—Building.—The Sheffield Coal, Iron & Land Co. have nearly completed plans for their large building previously reported. It will cost about \$50,000.

Sheffield—Machine Shops.—The Memphis & Charleston Railroad Co. (office, Memphis, Tenn.) state that they will begin work on their machine shops, previously reported, this spring.

Sheffield—Ice Factory.—Work on the plant of the Sheffield Ice Co., previously reported, will be commenced at once.

Trussville—Railroad.—The Alabama Great Southern Railroad Co. (office, Cincinnati, O.) will build a 4-mile branch road to coal mines near Trussville.

Tuscumbia—Opera House.—It is reported that a stock company has been formed to build an opera house.

Tuscumbia—Water Works.—W. H. Brundige, of Florence, contemplates building water works, and is receiving bids on machinery. The American Well Co., of Aurora, Ill., will sink the 6 artesian wells.

Tuskaloosa—Bottling Works.—George F. Dullin and Frank Deiner, of Nashville, Tenn., will establish mineral water and bottling works.

ARKANSAS.

Arkadelphia—College.—The contract for erecting the building for Ouachita College, previously reported, have been awarded Noah Hamlet, of Little Rock. The cost will be \$27,000.

Batesville—Electric Light Plant.—There is talk of an electric light plant being erected. If anything is done A. A. Webber can give information.

Batesville—Railroad.—The Batesville & Brinkley Railroad Co. (office, Little Rock) will change their road from narrow to standard gauge.

Camden—Water Works.—The Camden Water Works Co., capital stock \$30,000, has been organized to build water works, with S. Q. Sevier, Robert E. Snow, R. O. Alexander and Thomas J. Gaughan as directors. Mr. Sevier is president.

Camden—Brick Works.—Mr. Sithen has sold his brick works to parties who will operate them.

Camden—Hotel.—It is proposed to build a three-story brick hotel.

Little Rock—Hotel.—It is reported that a company is being formed to build a \$500,000 hotel. If correct the secretary Chamber of Commerce can probably give information.

Little Rock—Buildings.—W. J. Turner and Gans Bros. have let contract for a block of buildings.

Little Rock—Hospital.—B. J. Bartlet has prepared plans for a building to be erected for the Little Rock Charity Hospital. It will cost \$25,000.

Little Rock—Club Building.—The Little Rock Athletic Club will erect a three-story brick building 60x10 feet. B. J. Bartlet has prepared plans.

Lonoke—Hotel.—C. M. England & Co. will erect a three-story brick hotel, 65x60 feet, to cost \$10,000. Plans have been prepared.

Marianna—Lumber Mill.—The L'Anquille Lumber Co., capital stock \$20,000, has been incorporated by B. Miller, of Paoli, Kansas, and J. P. Dunham, Julius Lesser and others, of Marianna. Mr. Miller is president. They have purchased the lumber mill of Dunham & Griffiths, and are buying machinery to double the capacity.

Morrillton—Cotton Compress.—Efforts will be made to have a cotton compress erected.

Pine Bluff—Ice Factory.—Mr. Hicks is improving his ice factory, adding some new machinery, &c.

Rogers—Lime Works.—The Central Lime Co., C. A. Wickers, manager, are building kilns.

FLORIDA.

Bonifay—Lumber Mill.—Michigan parties are surveying lands in Holmes county, and will, it is said, probably erect a lumber mill.

Dade City—Canning Factory.—A stock company has been organized, with F. P. McElroy as secretary, to start a canning factory. Machinery is wanted.

Ellaville—Railroad.—Charles L. Bucke will extend his railroad to the Suwanee river at once.

Jacksonville—Gas Works.—The Citizens' Gas Light Co. are putting in new boilers.

Macclellan—Saw Mill.—C. B. McClellan has purchased machinery to start a saw mill.

Orlando—Hotel.—About 100 rooms are reported to be added to the San Juan Hotel.

Palatka—Ice Factory.—The Manatee Cattle Co. will, it is stated, start an ice factory

Pensacola—Church.—The Methodists have purchased a site to build a church.

Punta Gorda—Cigar Factory.—A cigar factory is reported to be started.

Quincy—Chair Factory.—A chair factory will be started by G. R. Wilk.

Tallahassee—Cotton Compress.—Coles, Simpkins & Co., of Brunswick, Ga., lately mentioned as purchasing machinery to erect a cotton compress, have incorporated as the Florida Warehouse & Compress Co. Their capital stock will be \$30,000.

Tallahassee—Ramie Factory.—There is talk of a company being formed to cultivate ramie and start a decorticating factory.

Tampa—Jail.—The board of county commissioners will receive, until April 3, bids for building the jail previously reported. Said proposals will be received in the following manner, viz: 1st. Proposals for the building complete. 2d. Proposals for the iron work, viz: cells, doors and window gratings. 3d. Proposals for the building complete, exclusive of the above-mentioned iron work.

Welaka—Hotel.—A \$10,000 stock company has been organized to build a hotel. J. S. North is president.

GEORGIA.

Americus—Hotel.—A company will probably be formed to build a hotel. The Americus Investment Co. can give information.

Americus—Matting Factory.—A party is making investigations with a view to starting a straw matting factory.

Atlanta—Flour Mill.—Zachry Bros. & Co. have completed their new flour mill. The daily capacity is 150 barrels.

Atlanta—Church.—The Baptists are raising money to build a church at West End. C. J. Kicklighter can give information.

Atlanta—Brick-yard.—John W. Rollo will start a brick-yard at West End.

Augusta—Electric Lights.—The Augusta Factory (cotton) are adding water wheel to run electric light machinery.

Augusta—Building.—The Augusta National Exposition Co. will receive bids for furnishing materials and erecting their main building previously reported.

Banning—Cotton Factory.—The Hutchison Manufacturing Co., reported last week as

putting in electric light machinery, are adding more spindles and other machinery.

Bainbridge—Hotel.—It is reported that a Northern party will build a hotel to cost \$150,000.

Brunswick—Docks, Warehouses, &c.—The East Tennessee, Virginia & Georgia Railroad Co. (office, Knoxville, Tenn.) expect to spend not less than \$100,000 in improving their docks, building cotton warehouses, etc. The will also establish a coaling station.

Brunswick—Cotton Compress.—A stock company will be chartered to erect the cotton compress previously reported; also to operate cotton warehouses, etc. The compress is now being made. About \$200,000 will be invested. Coles, Simpkins & Co. are interested.

Brunswick—Broom Factory.—C. Watts has started a broom factory.

Canton—Mica Mine.—The Georgia Mica & Mineral Co., of Ashtabula, O., will soon begin developing their mica mine near Canton.

Cedartown—Planing Mill.—Parties are talking of building a planing mill. If anything is done W. F. Nall can probably give information.

Cedartown—Iron Mine.—The Polk County Mining Co. previously reported, will develop an iron ore mine near Cedartown.

Cedartown—Churches.—New churches are reported to be built by the Methodists, Baptists and Presbyterians.

Columbus—Exposition.—The Chattahoochee Valley Exposition Co., capital stock \$10,000, has been organized. J. K. Orr can give information. 25 acres of ground have been secured.

Columbus—Knitting Factory.—Parties are negotiating for a building on Rose Hill with a view to starting a knitting factory.

Cordele—Saw Mills.—It is reported that J. C. Maxwell, of Leesburg, and others will build saw mills along the Georgia Southern & Florida Railroad.

Covington—Street Railroad.—Work will shortly be commenced on the street railroad previously reported. Rails are being negotiated for. W. Clark can give particulars.

Dalton—Machine Shop.—Finley & Field will build a machine shop, and want to purchase tools and machinery.

Dublin—Engine and Boiler Works.—Carter Bros. have, it is stated, started engine and boiler works.

Dublin—Factory.—A party from Maine has purchased timber lands, and with others will, it is stated, start a factory of some kind.

Griffin—Building.—Warren Lodge, I. O. O. F., will erect a large three-story building. The second story will be fitted up for an opera house.

Griffin—Steam Laundry.—A steam laundry will be started.

Holmes County—Lumber Mill.—Michigan parties will probably build a lumber mill.

Homerville—Saw Mill.—A large saw mill is being built three miles from Homerville.

Jones Mills—Chair Factory.—Haynes Milam has purchased machinery to start a chair factory.

Knoxville—Jail.—T. B. Artope, of Macon, has lately contracted to build a jail. He will commence work about June.

La Grange—Cotton Factory.—J. G. Truitt and others are organizing a company to build a 5,000-spindle cotton factory, and have purchased a site. Their capital stock will probably be \$150,000 or more.

Lumber City—Barrel Factory.—A barrel factory has been started probably by Savannah parties.

Monticello—College.—A college is to be built.

Newnan—Fertilizer Factory.—Efforts are being made to organize a company to build fertilizer works with a daily capacity of about 100 tons.

Normandale—Saw Mill and Railroad.—The Normandale Lumber Co. will build their saw mill, previously reported, within 4 months. They will change gauge of their road to standard and extend it 30 miles in the near future.

Rome—Sash, Door and Blind Factory.—Joseph B. Patton is enlarging his sash, door and blind factory.

Rome—Stave and Barrel Factory.—The stave and barrel factory reported last week as to be started by Channel, McKee & Co. will be moved from Hiram to Rome.

Savannah—Pattern Shop.—William Kehoe & Co. are building a pattern shop, etc., and not a brass foundry, as reported last week.

Savannah—School.—The board of education have purchased a site on Henry street to build a school.

Silver Creek—Iron Mines.—Iron mines are being developed on the land of O. P. Ritch.

Tallapoosa—Wood-working Factory.—Mr. Curtis will probably start a wood-working factory.

Tallapoosa—Malleable Iron Works.—The Tallapoosa Malleable Iron Works, previously reported, have organized with J. F. Lang as president; Fred. Wicks, secretary, and P. D. Johnson, treasurer.

Tallapoosa—Cornice Works, &c.—J. T. Canble & Co., of Eatonton, Ga., will manufacture cornice work, tinware, etc.

Thomasville—Steam Laundry.—A steam laundry will be started.

Valdosta.—Hotel.—A hotel is projected.

KENTUCKY.

Ashland—Mining.—The Rustic Mining Co., capital stock \$100,000, has been chartered by Edwin P. Merritt, Charles H. Merritt and William H. Clarkson.

Beattyville—Mineral Lands.—The Kentucky Three Forks Mineral Co. are purchasing about 3,000 acres more of mineral lands.

Beattyville—Coal and Timber Lands.—The Catron's Creek Coal Co. will, it is said, purchase about 4,000 acres of coal and timber lands.

Frankfort.—Bills have been introduced in the legislature to incorporate the Metropolitan Electric Light & Electrical Supply Co.; the Campbellsville, Elkhorn & Mannville Turnpike Road Co.; the Franklin Water Co.; the Beech Ridge Mining & Mineral Co.; the Frankfort Mining, Reduction & Manufacturing Co.; the Kentucky & Northern Bridge Co.; the Kentucky Southern Bridge Co.; the Elkhorn Mill & Lumber Co.; the Hungry Knoll Street Railroad Co.; the Cumberland Gap & Mississippi Valley Railroad Co., capital stock \$10,000,000, with Joseph F. Foard, Edward P. Campbell, Samuel J. Keith and others as corporators; the Ohio Falls Electric Water Power Co., (Louisville,) capital stock \$2,500,000, with Thomas F. Gaynor, W. R. Ray, Young E. Allison, John J. Barret and others as corporators; the Columbia & Jamestown Telephone Co.; the Pond Meeting-House Turnpike Road Co.; the Portsmouth, Kentucky & Cape Fear Railroad Co.; the Red Lick Turnpike Road Co.; the Vandalia Construction & Development Co.; the Garners & Lovelace Turnpike Road Co.; the Absolam Turnpike Road Co.; the Fern Creek & Seatonville Turnpike Co.; the Green River Bridge Co., to build a bridge across the Green river at or near Greensburg; the Laketown Fence Co.; the Fox Creek & Mercer County Turnpike Road Co., and the Kentucky & Rockport (Ind.) Bridge Co., to build a bridge across the Ohio river, with E. P. Taylor, D. M. McHenry and others as corporators.

Henderson—Water Works.—The Gordon & Maxwell Pump Co. have received contract to furnish the new pumping machinery for the water works, previously mentioned.

Lexington—Watch Factory.—Thomas H. McLughlin, of New York, is negotiating to establish a watch factory. If anything is

done the secretary Chamber of Commerce can give particulars.

Lexington—Belt Railroad.—J. E. Keller and others have chartered a company to build the belt railroad previously reported. The road projected is fourteen miles long.

Liberty—Courthouse.—The contract to build the courthouse previously mentioned has been let to T. T. Melburn, of Fayetteville, Ark. The cost will be \$19,000.

Louisville—Buildings.—Sallie Y. Henderson will erect a brick store building to cost \$13,900, and Clarence Warren a \$6,000 brick dwelling.

Louisville—Church.—An addition will be built to Calvary Church, on Fourth avenue, to cost \$40,000.

Louisville—Steam Laundry.—Robert Tyler and W. A. Haas have incorporated the Crown Laundry Co., capital stock \$4,000, to start a steam laundry.

Louisville—Fertilizer Works.—The Globe Fertilizer Co. will double their capacity this year.

Newport—Woodenware Factory.—J. M. Hamilton and others have incorporated the Folding Hat-Rack Co., capital stock \$1,000, to manufacture hat-racks, ornamental wood-work, &c.

Newport—Water Works.—Proposals for changing the effluent system at the water works reservoir, comprising open cut and tunnel excavation, brick and stone masonry, &c., will be received until April 2 by the board of trustees.

Owenton—Tobacco Factory.—A tobacco factory will probably be started.

Paducah—Water Works.—The Paducah Water Supply Co. have sold their works and franchise to the Paducah Water Co., lately reported as organized.

Paradise—Coal Mine.—The Green River Coal & Mining Co. will open coal mines, one each at Paris, Riddall and Taylor. Have ordered machinery.

Paris—Water Works.—The proposition of J. E. Thompson to build water works has been accepted, and an election will be held on April 14 to ratify the contract.

Paris—Street Railroad.—Jas. M. Thomas has purchased rails for the street railroad lately mentioned as to be built.

Richmond—Elevator.—An elevator will be built by the Richmond Coal, Elevator & Lumber Co.

Woodbine—Coal Mine.—The North Jellico Coal Co., lately mentioned as organized, will open this year a mine with a capacity of 500 tons daily. Have a four-foot seam. They own about 2,000 acres of coal lands.

LOUISIANA.

New Orleans—Broom Factory.—The Merchants Broom Manufacturing Co., capital stock \$10,000, has been chartered.

New Orleans—Cotton Mills.—F. W. Freret & Co., previously reported as raising money to build a cotton mill, intend to organize a \$2,000,000 company. Will probably build two mills—one of 40,000 spindles capacity to manufacture cottons, brown and colored, and the other with capacity of 250 looms to manufacture jeans and fancy woolens and blankets.

MARYLAND.

American Corners—Canning Factory.—B. W. Parker will start a canning factory.

Annapolis.—A bill has been introduced in the legislature to incorporate the Baltimore County Water Co., capital stock \$50,000, to furnish Towson and other places with water. The corporators named are James G. Wilson, Henry C. Turnbull and others.

Baltimore—Buildings.—S. A. Tracey will build 8 two-story houses on Bouldin alley near Wilson street, and P. J. King, 10 two-story houses on Hare street and 2 three-story houses on Canton street.

Baltimore—Warehouse.—John Scherer & Son will build a six story warehouse on Raborg street near Fremont.

Baltimore—Slate Works.—M. Gault & Sons will put two new boilers and engines, each 100 horse-power, in their state works at Penn and Pratt streets.

Baltimore—Church.—The Methodists will build a church near Mt. Olivet cemetery. Rev. W. W. Davis can give information.

Baltimore—Gas Works.—A bill has been introduced in the legislature at Annapolis to authorize the mayor and city council to issue \$5,000,000 of stock to build gas works and an electric light plant.

Baltimore—Schools.—Appropriations will be made by the city council for erecting several school buildings.

Baltimore—Church.—The East Baltimore Station M. E. Church have adopted plans for their new edifice previously reported to be built corner Baltimore and Washington streets. It will be of stone.

Belair—Stone Quarries.—The property of the Serpentine Marble Co. in northern part of Harford county has been sold to Thomas Baumgardner, of Lancaster, Pa., for \$40,500.

Cambridge—Water Works.—Water works are projected.

Churchville—Railroad.—The Dear Creek & Susquehanna Railroad Co., previously reported, will secure engineers to survey and locate a road from Belair to the Susquehanna river.

Cumberland—The Sixth German Building Association has been organized with George Schwarzenbach as president, and John Schiller, secretary.

Denton—Canning Factory.—Several more canning factories are to be started in Carroll county.

Eikton—Paper Mills.—C. S. Garrett & Son, 12 and 14 Decatur street, Philadelphia, Pa., have purchased the Ledger Paper Mills in Cecil county, and will improve and operate them.

Fallston—Cooperage Works.—William Gordon will start cooperage works.

Fallston—Canning Factory.—A canning factory will be started by August Martin.

Forest Glen—Sanatorium.—A sanatorium is being erected by William Wright.

Frederick—Street Railroad.—T. William Harris, of New York, is corresponding with a view to organizing a company to build a street railroad.

Glyndon—Saw Mill.—George Hull has purchased timber lands and moved his saw mill from Hanover, Pa., to Glyndon.

Reckord—Canning Factory.—Clayton & Gross are erecting a canning factory for Mr. Price.

Reckord—Canning Factory.—Thomas Skilton talks of starting a canning factory.

Sharpsburgh—Iron Furnace.—It is reported that the Antietam Iron Works will put their iron furnace in operation. It has been idle since 1883.

Towson—Reservoir.—The Towson Water Co. will build a reservoir with a capacity of 36,000 gallons.

Vale—Canning Factory.—W. E. Robinson & Bro. will build a canning factory.

Washington, D. C.—University.—The contract for the stone work and brick work of the Catholic University, previously reported, has been let to Bryan Hanrahan, of Baltimore, Md.

Washington, D. C.—Power Plant.—The National Super Heater Water Co. have sold the plant of the Washington Heat & Power Co. to Theodore M. Vail, of Boston, Mass., for \$30,000.

Washington, D. C.—Residence.—T. F. Schneider has prepared plans for a three-story residence, 25x67 feet, to be built by Aldis B. Browne.

Washington, D. C.—Buildings.—C. C. Martin will erect four brick dwellings on Fourteenth street to cost \$18,000, and Edward Godey, five brick dwellings on L street to cost \$10,000.

MISSISSIPPI.

Columbus—Railroad.—The Georgia Pacific Railroad Co., (face, Birmingham, Ala.) reported last week as to build from Columbus to Starkville, contemplated, as previously mentioned, building from Columbus to Johnsonville, about 135 miles, and have surveyed two routes. They have incorporated the Georgia Pacific Extension Co. to build the extension.

Ellisville—Saw Mill.—New boiler and engine and other machinery has been put in the saw mill of J. A. Boyd.

Greenville—Cotton Factory.—It is reported that parties are negotiating for machinery to start a cotton factory.

Greenville—Steam Laundry.—A steam laundry will be started.

Greenville—Electric Lights.—The Coleman-Carley Construction Co. have made a proposition to light the city with electricity.

Hasthurst—School.—A \$15,000 school building is reported to be erected. The mayor can probably give information if true.

Jackson—School.—The city will build a large school in the summer.

Mason—Street Railroad.—The Mason Street Railroad Co. has been organized with J. L. Griggs as president, and John R. Dinsmore, secretary.

Meridian—Ice Factory.—The Meridian Ice Co., previously reported, are building a factory with a capacity of 20 tons.

Natchez—Cotton Mill.—The Rosalie Mill Co. have been considering doubling the capacity of their mill.

Vicksburg—Warehouses.—C. M. Flanagan & Co., of St. Louis, Mo., will build two large warehouses.

Vicksburg—Carriage Factory.—D. Phelan will double the capacity of his carriage factory.

Yazoo City—Telephone Line.—Crane Bros. & Co. have been ascertaining the cost of building a telephone line to Belzoni, about 34 miles.

NORTH CAROLINA.

Asheville—Brick Works.—J. Wallach has purchased an old brick-yard and will add machinery for manufacturing dressed brick.

Asheville—Flour Mill.—H. F. Collins has commenced work on his roller flour mill previously reported.

Asheville—Plumbago Mine.—John M. Campbell will shortly open a plumbago mine with a view to developing if material is in sufficient quantity.

Asheville—Gold Mine.—Adam Burdine has leased the Boilston gold mines and will develop.

Brittany—Gold Mine.—P. H. Loud has purchased a half interest in the Idler gold mine and will put in machinery to develop.

Charlotte—Cotton Mills.—The contract for the brick work of the Alpha Mills (cotton), previously reported, has been let to D. K. Cicil.

Charlotte—Furniture Factory.—A furniture factory is to be started shortly.

Concord—Flour Mill.—R. M. Blackwelder, reported last week as purchasing a site to build a flour mill, has not yet fully decided to build.

Davidson County—Mining.—The Fisher-Reid mine is to be thoroughly opened.

Dunn—Saw and Grist Mill.—A saw and grist mill and cotton gin are being erected by Thomas Fowler.

Egypt—Coal Mine.—A. H. Leftwich, of Greensboro, previously reported as developing coal mines, has, with James A. Hennessee and W. E. Anderson, incorporated the Egypt Coal Co., capital stock \$250,000. They propose to extensively develop coal mines.

Fayetteville—Bridge.—The Cape Fear & Yadkin Valley Railroad Co. are ascertaining the best point at which to build their bridge across the Cape Fear river.

Fayetteville—Knitting Factory.—There is talk of starting a knitting factory.

Forest City—Saw Mill.—W. H. Jones will add planing machinery to his saw mill and probably a shingle machine.

Forest City—Cotton Factory.—The company previously reported as being formed to build a cotton factory by G. E. Young and others, have adopted plans for their factory buildings and are negotiating for machinery.

Gastonia—College.—The Catholics will erect a new college building, three stories, 60x54 feet, to cost about \$15,000.

Goldsboro—Cotton Factory.—Subscriptions are being received towards organizing the company to build the cotton factory previously reported. The capital stock will be \$100,000.

Greensboro—Electric Light Plant.—R. L. Vernon, C. P. Vanstory, C. D. Benbow and others have chartered the Greensboro Electric Light & Power Co., capital stock \$35,000. Will succeed the Thompson-Houston Electric Light Co.

Greensboro—Candy Factory.—Mr. Trowdon is organizing the Greensboro Candy Co. The capital stock will be \$10,000.

Greensboro—Factory.—The Chamber of Commerce has raised \$10,000 to be subscribed to the capital stock of some manufacturing company.

Haw River—Cotton Factory.—It is reported that the Falls of Neuse Manufacturing Co. have purchased and will add to their cotton factory 1,200 spindles and 11 looms.

Henderson—Electric Light and Gas Plant.—The Henderson Electric Light & Gas Co. has been organized with W. H. S. Burgwyn as president; J. R. Young, vice-president, and J. P. Taylor, secretary and treasurer. They propose to commence work on their plant at once.

King's Mountain—Smelting Works.—The report lately referred to that the Carolina Mining Co. contemplate erecting smelting works is not true.

King's Mountain—Cotton Factory.—The King's Mountain Manufacturing Co., previously reported as to build a cotton factory, will start a factory with a capacity of from 1,200 to 2,000 spindles. They want to purchase a full outfit of machinery. Expect to spin as fine as No. 30 yarn.

Laurinburg—Iron Foundry.—There is talk of an iron foundry being erected.

Lumberton—College.—The Baptists have purchased a site to build a college.

Macon County—Mica Mines.—J. C. Townsend will erect machinery to develop a mica mine.

Mapleton (P. O. McCormick)—Cotton Mill.—Searles & Davis, previously reported as to increase capital stock and add 400 spindles to their cotton mill, have incorporated as a stock company with \$25,000 capital. Mr. Searles is president.

Oxford—Broom Factory.—B. F. Dixon has purchased a broom factory at Goldsboro and will remove it to Oxford.

Round Knob—Cotton Factory.—A company has been organized to build a cotton factory. E. F. Reid is treasurer and can give information.

Rutherfordton—Gold Vein.—Gaden, Weaver & Twitty are testing a vein of gold.

Salisbury—Tobacco Factory.—Eugene Johnson will build a tobacco factory and has purchased a site.

Salisbury—Tobacco Factory.—A party has been looking for a site for a tobacco factory.

Weaverville—Woolen Mill.—Machinery will be added to the Reems Creek Woolen Mill.

Welch—Furniture Factory.—J. R. Cripe will start a furniture factory.

Wilmington—Church.—The First Colored Baptist Church, Rev. A. M. Conway, pastor, are raising money to build a brick church.

Wilmington—Fertilizer Factory.—E. J. Powers will be interested in the fertilizer factory previously reported to be built.

Wilmington—Chemical Works.—Frank S. Clark is now erecting the works to manufacture acetate of lime, wood alcohol, &c., previously reported.

Wilmington—Matting Factory.—The Acme Manufacturing Co. are purchasing the additional machinery for their matting factory previously reported.

Winston—Cotton Factory.—A Northern party has made a proposition to furnish machinery for a cotton factory. If anything is done the secretary Chamber of Commerce can give information.

SOUTH CAROLINA.

Aiken—Hotel.—The building of a large hotel is being agitated. F. B. Henderson can give information if anything is done.

Aiken—Building.—The Aiken Institute, recently mentioned as chartered, will erect a building to cost from \$4,000 to \$8,000. Frank H. Curtis, president, can give information.

Barnwell—Street Railroad.—It is stated that a street railroad will be built. M. Brown can give particulars if true.

Charleston—Creosoting Works.—Wm. M. Bird, Henry F. Welch and John Davis have incorporated the Acme Creosoting Co., capital stock \$25,000, to build creosoting works.

Georgetown—Cotton Compress.—It is rumored that a cotton compress will be erected.

Laurens—Cotton Gin Factory.—There is talk of a cotton gin factory being started.

Orangeburg—Cotton Mills.—The Orange Cotton Mills are adding 576 spindles.

TENNESSEE.

Athens—Brick Works.—Joseph J. Ivins and Samuel P. Ivins, Jr., have purchased machinery to start brick works. The daily capacity will be about 30 M brick.

Bristol—Lime Works.—Thomas E. Bibb and others contemplate establishing lime works.

Bristol—Brick Works.—C. F. Gauthier and Jerome Huile, of Troy, N. Y., have been prospecting for a site for brick works.

Cedar Hill—Flour Mill.—The flour mill of John Tyson will, it is stated, be moved from Ashland City to Cedar Hill.

Chattanooga—Railroad.—Eaton & Co. have contracted to build part of the Lookout Mountain Railroad and are at work.

Chattanooga—Asphalt Plant.—The Warren Schaff Asphalt Paving Co. will erect a plant to cost about \$12,000 if they secure the contract to pave Market street.

Chattanooga—Lumber.—F. W. Blair, J. T. Willingham, A. W. Chambliss and others have chartered the Blair Lumber Co. to buy and sell and manufacture lumber, &c.

Chattanooga—Rolling Mill.—The Lookout Rolling Mill Co. will move their mill to East End.

Chattanooga—Electric Light Plant.—The D. M. Steward Manufacturing Co. contemplate putting in an electric light plant.

Chattanooga—Land.—The Chamberlain Avenue Land Co. has been chartered by Charles A. Lyerly, S. W. Divine and others.

Clarksville—Building.—The Episcopalians have plans prepared for a parsonage to cost about \$5,000.

Clarksville—Iron Foundry.—It is rumored that Whitefield, Bates & Co. will build a large new iron foundry.

Cleveland—Chair Factory.—The Cleveland Chair Co. have put in some new machinery.

Cleveland.—A \$50,000 building and loan company has been organized with C. L. Harwick as president.

Clinton—Zinc Furnaces.—The Eads, Mixer & Heald Zinc Co. is preparing to add two more furnaces to their works.

Coal Creek—Coal Mine.—The Coal Creek Coal Co. will put in tail rope soon with engine and boiler. Want to haul 600 tons per day.

Covington—Barrel Factory and Shingle Mill.—R. G. Goodman and others will start a barrel factory and a shingle mill and want to purchase machinery.

Elizabethton—Paint Mill.—C. Carson will build a paint mill.

Gallatin—Spoke Factory.—The Gallatin Manufacturing Co. will add three more spoke lathes.

Gallatin—Church.—The Presbyterians are raising money to build a church. J. H. McLaren can give information.

Glen Mary—Coke Ovens.—Additional coke ovens are being built by the Glen Mary Coal & Coke Co.

Helenwood—Coal Mines.—It is reported that a company has been formed by New York parties to develop coal mines near Helenwood.

Helenwood—Saw Mill.—Chandler & Packett have, it is stated, purchased the saw mill of Blevins & Co. and will remove it to a point 3 miles from Helenwood.

Knoxville—Soap Factory.—The Knoxville Soap Co. will probably soon increase their capacity.

Knoxville—Electric Railroad.—There is talk of an electrical street railroad being built to Fountain Head.

Knoxville—Fire Alarm System.—The contract to put in the fire alarm system previously mentioned has been awarded to the Gaynor Electric Supply Co., of Louisville, Ky.

Louisville—Spring Factory.—A company is reported as being formed to manufacture bed springs. H. T. Cox can give information.

Louisville—Sash, Door and Blind Factory.—A sash, door and blind factory is being built.

Louisville—Barrel and Keg Factory.—A barrel and keg factory is projected. H. T. Cox can give information if anything is done.

Memphis—Railroad.—The Memphis, Oxford & Columbus Railroad Co., lately reported as chartered to build a railroad to the Mississippi State line, has been organized with John W. Dillard, as president, and W. D. Wilkerson, secretary. The capital stock is \$150,000. The Chicago Construction Co., of Chicago, Ill., have contracted to build the road. A company has been formed in Mississippi to continue the road to Columbus.

Memphis—Dummy Railroad.—The Memphis & Raleigh Railroad Co., previously reported as to build a dummy railroad to Raleigh, are having surveys made for a new route which they will probably decide to adopt.

Mossy Creek—Creamery.—A creamery is to be started with S. N. Fain as manager.

Mossy Creek—Hotel.—A hotel is contemplated.

Nashville—Cold Storage Warehouse.—The Consolidated Refrigerating Co., of New York City, are establishing a cold storage warehouse.

Nashville—Machine Works.—The Eureka Manufacturing Co., of Louisville, Ky., will move their works for manufacturing gas machines, &c., to West Nashville and have secured a site. They will increase their capacity.

Nashville—Flour and Corn Mill.—E. T. Noel will refit his flour and corn mill with an outfit of new machinery at a cost of \$175,000. The capacity will be 1,000 barrels flour and 2,000 bushels corn meal per day.

Nashville—Street Railroad.—The street railroad company of which Mr. Deaderich is superintendent are purchasing electric motors to run their cars. They will relay their track with heavier rails.

Nashville—Railroad.—A subscription of \$200,000 has been raised for the Tennessee Midland Railroad, insuring the building of the road to Nashville.

Nashville—Sewers.—The Board of Public Works will build three large sewers during the year to cost \$19,000. Plans and specifications have been prepared and bids will shortly be advertised for.

Nashville—Brick Works.—E. C. Leusueur & Son are adding some new machinery to their brick works.

Nashville—Building.—Ground has been broken for the Law and Dental building for the Vanderbilt University, previously reported. It will be five stories and will cost \$48,000.

Nashville—Machine Works.—The Nashville Machine Co. will add some machinery to their works.

Nashville—Railroad.—The Nashville & Knoxville Railroad Co. have purchased rails for 48 miles of their road, previously reported.

Nashville—D. M. Bright, of Chattanooga, has been negotiating for the removal of the Southern Grate Co.'s works from Chattanooga to West Nashville.

Owen—Saw Mill.—A saw mill has lately been erected by Lathrop & Schofield.

Pleasant View—Flour Mill.—Newton & Basford have, it is reported lately put roller machinery in their flour mill.

Pulaski—Rolling Mill.—Parties contemplate moving a (iron) rolling mill to Pulaski during the summer if a certain amount of stock is taken in a company to be formed to operate the mill. Should anything be done L. D. McCord can give information.

Shelbyville—Carriage Factory.—McDowell Bros. will rebuild their carriage factory reported last week as burned. It will be two stories, 45x70 feet.

Shelbyville—Machine Shop.—F. M. Johnson is erecting a new building for his machine shop.

South Pittsburg—Street Railroad.—Two companies are petitioning for privilege to build a street railroad.

Sweetwater—Canning Factory.—A canning factory is projected.

Tellico Plains—Saw Mills.—W. C. Heyser & Co., of Michigan, who recently purchased large tracts of timber lands, will, it is stated, build lumber mills.

Tracy City—Coal Mine.—A coal mine is reported to be opened 2 miles from Tracy City.

Tullahoma—Water Works.—Efforts are being made to form a stock company to build water works. George W. Davidson can give particulars.

Tullahoma—Cigar Factory.—A cigar factory will be started by E. H. Williams.

Tullahoma—Stave Factory.—A stave factory will be started.

Tullahoma—Saw and Planing Mill.—The saw and planing mill of G. W. Stegall will be enlarged.

Union City—Flour Mill.—W. F. Matthews will build a roller flour mill with a daily capacity of about 150 barrels.

Winchester—Building.—T. A. Embrey will erect a brick building, 66x100 feet, the upper part to be used as an opera house.

Winchester—Marble Lands.—New York parties have been negotiating with Girton & Smith for marble lands. If purchased they will form a stock company to develop.

TEXAS.

Austin—Lime Works.—Martin & Walker will manufacture lime.

Beaumont—Lumber Mill.—The Nona Mills Co. have increased their capital stock to \$100,000.

Beaumont—Lumber.—The Beaumont Lumber Co. have increased their capital stock from \$200,000 to \$400,000.

Bells—Gin and Corn Mill.—J. W. Swelk will start a cotton gin and corn mill, and wants to purchase machinery.

Carr—Pottery Works.—Mr. Hogue has ordered machinery to rebuild his pottery works reported in this issue as burned.

Corsicana.—The Corsicana Land & Investment Co. has been organized. A. N. Evans is manager.

Corsicana—School.—The city council have decided to erect a school building.

Cuero—Water Works.—C. M. Terrell, John O. French and others contemplate building water works. They propose to secure water from the Guadalupe river by means of canal, which would also furnish power for manufactory.

Dallas—Pork Packing Establishment.—Several parties contemplate starting a pork packing establishment.

Dallas—Mining.—The Boss Gold Mining Co. has been organized to develop mines in Arizona. C. B. Daggett is secretary and treasurer.

Dallas—Building.—The contract for the masonry work of the building for the Farmers' Alliance, lately reported, has been awarded to P. J. Butler at \$14,817.50, and the contract for the carpenter work, &c., to John A. Johnston at \$19,900.

Denison—Railroad.—The capital stock of the Denison & Washita Railroad Co., previously reported, has been increased to \$2,000,000.

Denton—City Hall and Jail.—The city council will issue bonds to build a city hall and jail. The mayor can give information.

El Paso—Concentrating Works.—E. J. Field has been prospecting with a view to building concentrating works. Has not yet decided on building.

El Paso.—J. G. Gral, Louis B. Frenenthal, E. S. Newman and others have chartered the Rio Grande Immigration Co., capital stock \$200,000.

Galveston—Stand Pipe.—Moffett, Hodgkins & Clarke, of Watertown, N. Y., previously reported as receiving the contract to build the stand pipe for the new water works, have failed to accept the contract, and it has been awarded to Ritter & Conley, of Pittsburgh, Pa.

Galveston—Railroad.—The Galveston Western Railway Co. have purchased the narrow gauge road from the Mexican National Construction Co.

Hillsboro—Planing Mill.—William Cameron & Co., of Waco, state that they will not build a planing mill as lately reported.

Huntsville—School.—The city will shortly decide by a popular vote whether or not to build a school-house to cost \$8,000.

Jefferson—Gas Works.—H. B. Thomas is making some improvements to his gas works.

Morgan—Woolen Mill.—It is stated that efforts are being made to start a woolen mill.

Plano—Cotton Compress.—A cotton compress will be erected at a cost of \$40,000. Taylor & Wood are interested.

Rusk—Iron Mining.—The Cherokee Land & Iron Co., reported last week as chartered with a capital stock of \$800,000, have decided to commence with a capital stock of \$1,000,000. The company own about 20,000 acres of mineral and timber lands, and contemplate, it is said, building large iron furnaces.

St. Jo—Flour Mill.—The St. Jo Milling Co. have selected a site to build a flour mill.

Terrell—Canning Factory.—A company is being organized to start a canning factory.

Waco—Bridge.—The King Iron Bridge Co., of Cleveland, Ohio, have transferred their contract to build the iron bridge across the Brazos river to Lee Slaughter.

Waxahachie—Water Works.—The building of water works to cost about \$30,000 or \$40,000 is being agitated. E. A. Du Bose can give information when anything is done, which will probably not be before summer.

Wharton—Opera House.—The Wharton Opera House Co. has been organized to build an opera house.

VIRGINIA.

Alexandria—Gas Works.—The Alexandria Gas Works are to be remodeled and improved. Barlett & Hayward, of Baltimore, Md., will receive contract for the new gas tank at \$4,000.

Alexandria—Machine and Boiler Shops.—J. & H. Aitcheson will build a new machine and boiler shop two stories, 33x60 feet, with wing 18x33 feet. The cost of buildings will be \$4,000.

Alexandria—Oil Warehouse.—The Baltimore United Oil Co., of Baltimore, will build an oil warehouse.

Alexandria—Canning Factory.—Maryland parties have been prospecting for a site for a canning factory.

Amherst—Canning Factory.—Arrangements are being made to start a canning factory, and machinery is wanted. Address J. E. Jackson.

Big Stone Gap—Capitalists are having coal and iron lands about 10 miles from Big Stone Gap prospected.

Big Stone Gap—Saw, Planing and Shingle Mill.—Birch & Dutton, of Warren, will move their saw, planing and shingle mill to Big Stone Gap.

Big Stone Gap—Coke Ovens.—It is reported that the South Atlantic & Ohio Railroad Co. (office Bristol, Tenn.) has contracted for 300 coke ovens.

Big Stone Gap—Coal Mine.—The Pioneer Coal & Coke Co., of Knoxville, Tenn., previously reported, are now mining coal and building a short railroad. They are building a few ovens to test their coal for making coke, and if results are satisfactory will build a large coke plant.

Churchville—Canning Factory.—The capital stock of the Churchville Canning Co., reported last week as organized to start a canning factory, is \$5,000.

Danville—Tobacco Factory.—Schoolfield & Watson will manufacture tobacco.

Danville—Warehouse.—The Danville Storage Co., previously reported, contemplate building a large tobacco warehouse. Will probably soon commence work. The capacity will be 6,000 hds. or more.

Gordonsville—Creamery.—A creamery will be started.

Lebanon—Bridge.—H. M. Crosby, of Wytheville, has contract for the stone work of a bridge across the Clinch river.

Leesburg—Bank.—The People's National Bank has been organized and will erect a building.

Lexington—Tin Mines.—The Irish Creek Tin Mine property, previously reported, has been sold to Northern parties.

Lynchburg—Railroad.—J. W. Goodwin, chief engineer Lynchburg & Durham Railroad Co., will receive until April 3 bids for the grading, masonry work and trestling of the 10 miles of road beginning at Rustburg and running south, the next section of 10 miles and for 3 9-10 miles from end of second section to Staunton river, including bridge masonry; also bids for building a bridge across the Staunton river.

Lynchburg—Buildings.—John P. Pettyjohn has contracted to build a number of station houses and other buildings along the Norfolk & Western Railroad.

Newport News—Warehouse.—The Newport News & Mississippi Valley Railroad Co. will build a large warehouse for storing flour.

Petersburg—Wood working Factory.—D. S. Walton, C. W. Ballard and P. S. Lewis, of New York, and George B. Watson and Emmett R. Morton, of Petersburg, have incorporated the Virginia Manufacturing Co. to manufacture butter dishes, veneers, woodenware, &c. The capital stock is to be not less than \$20,000 nor more than \$100,000.

Portsmouth—Paving.—Proposals for 1,200,000 paving bricks, 22,000 linear feet curbing, 18,000 linear feet gutter stone, 4,000 feet flag stone, 1,004 feet 12 inch vitrified drain pipe with rings, 1,140 feet 24-inch vitrified drain pipe with rings, &c., will be received until March 29 by John H. Hume.

Richmond—The Columbia Heights Land Co. has been organized with Sol. Haas as president. The capital stock is to be not less than \$200,000 nor more than \$1,000,000.

Roanoke—Hotel.—Henry Felix, of Buchanan, will, it is stated, build a five-story hotel to cost \$30,000.

Rockingham County—Parties have been prospecting for a site for a tannery and bark extract works.

Shenandoah—Manganese Lands.—Staples & Co. will prospect mineral lands; also Whistler & Co.

South Boston—Grading and Paving.—Proposals for grading and paving Main street, about 9,000 square yards, will be received until April 10 by W. D. Barbour.

Staunton—Canning Factory.—A canning factory is projected.

Staunton—Church.—The Bethel Church contemplate building a new church or having their present church repaired, and are having estimates made. S. F. Pilson can give information.

Staunton—School.—Proposals for erecting a school will be received until March 29 by V. P. Tams.

Staunton—Binder Factory.—There are prospects of a binder factory being started. If anything is done the secretary Chamber of Commerce can give information.

Virginia Beach—Electric Light Plant.—The Virginia Beach Co. are erecting an electric light plant.

Warrenton—Brick Yard.—A brick yard is reported to be established. J. A. Bethune can probably give information.

Waterloo—Saw Mill.—The saw mill of Armstrong & Shaw, reported last week as burned, will be rebuilt.

Winchester—Canning Factory.—A company will be worked up to start the canning factory previously reported. T. H. Goson can give information when anything is done.

Winchester—Canning Factory.—J. Miller Long and Daniel Baker will start a canning factory.

WEST VIRGINIA.

Braxton C. H.—Pottery.—Russell & Pool will rebuild their pottery, reported last week as burned. Will erect a three-story building, 30x40 feet.

Burton—Flour Mill.—E. J. Freeland is building a roller flour mill.

Benwood—Building.—The city has purchased a site for proposed city building.

Charleston—Brick Works.—Machinery is being put in at the brick works of W. A. Bradford & Co.

Charleston—Church.—The Baptists are negotiating for a site to build a new church.

Charleston—Bank Building.—The Charleston National Bank are preparing to erect a building.

Charleston—Steam Laundry.—L. Kaufman will add machinery to his steam laundry.

Fairmont—Electric Light Plant.—Electric light machinery is reported to be erected at the Montana mines, near Fairmont.

Glenwood—Tin Mining.—F. Ford has procured tools and will shortly begin opening mines for the Glenwood Tin Mining & Smelting Co.

Lewisburg—Creamery.—A creamery is to be re-established.

Martinsburg—Lime Works.—The Standard Lime & Stone Co. has been chartered to manufacture lime by William G. Baker, of Buckeytown, Md.; Joseph D. Baker, Frederick, Md.; Franklin C. Thomas, Mar-

tin
lim
P
repe
Hot
mill
Lan
P
ing
Can
plan
R
Ohio
are
Che
read
W
All
& Co
Av
Scho
Ba
gin o
Ba
& Bel
Bel
of E
L. K
Car
Hoge
Cle
repai
Railro
Mo
Belbe
Shu
ment
Editor
Fin
machi
machi
South
locate
M
Editor
On
Cannin
with p
ege of
Burks,
mene
buildin
machin
(ah) f
Conte
CHATT
Editor
I am
& Barto
chinery
a large
of Annis
miles to
upply t
are yet
upply o
on railro
Mining C
line

gibburg, and others. The capital stock is limited to \$100,000.

Parkersburg—Hotel.—A new hotel is reported to be built on the site of Hill's Hotel.

Parkersburg—Planing Mill.—A planing mill is being built by the Little Kanawha Lumber Co.

Parkersburg—Mr. Thayer is corresponding with a manufacturing company at Canton, O., who contemplate moving their plant to Parkersburg.

Rowlesburg—Railroad.—The Baltimore & Ohio Railroad Co. (office, Baltimore, Md.) are reported as leasing coal lands along Cheat river with a view to building a railroad from Rowlesburg to Fairchance.

Wheeling—Building.—Christian Hess will erect a three story brick building.

BURNED.

Alexandria, Va.—The shipyard of Agnew & Co.

Avondale, Ala.—The opera house of H. Scholz. Will be rebuilt.

Barnwell, S. C.—The steam grist mill and gin of D. S. Hartzog.

Bayou Meto, Ark.—The distillery of Frey & Black.

Bellevue, Fla.—The axe handle factory of E. E. Converse, and the rice mill of Ira L. Keller.

Carr, Texas.—The pottery works of Mr. Hogen. Will be rebuilt at once.

Cleburne, Texas.—The round house and repairshop of the Gulf, Colorado & Santa Fe Railroad Co., (since, Galveston.)

Mobile, Ala.—The grist mill of William Bebeze, 5 miles from Mobile; loss \$2,500.

Shubuta, Miss.—The printing establishment of M. E. Stovall.

Will Build Machine Shop.

DALTON, GA., March 15, 1888.

Editor Manufacturers' Record:

Finley & Fields will erect building for machine shop, and will want tools and machinery. A site has been given the Southern Steel Works and they will soon locate here.

D. K. MCKANNY.

Canning Factory.

MONTICELLO, ARK., March 14, 1888.

Editor Manufacturers' Record:

On the 10th instant the Drew County Canning Co. was permanently organized, with paid-up stock of \$5,000, with privilege of increasing same to \$15,000. C. L. Burks, president. We are going to commence this season. Have bought grounds, buildings, &c., but have not yet purchased machinery, and would like to have prices (cash) from different firms.

F. H. MATTHEWS, Sec.

Contemplate Erecting Electric Light Plant.

CHATTANOOGA, TENN., March 17, 1888.

Editor Manufacturers' Record:

We are contemplating putting in an electric light plant.

THE D. M STEWARD MFG. CO.

CEDARTOWN, GA., March 10, 1888.

Editor Manufacturers' Record:

I am a member of the firm of Bigelow & Barton. Together we are erecting machinery and preparing to mine iron ore on a large scale. The Woodstock Iron Co., of Anniston, Ala., have built a railroad 3 miles to our banks and we are ready to supply them in large quantities of the best we yet found in northwest Georgia—the supply only limited by facility to transport to railroad the ore. The Polk County Mining Co. will also develop ore mine on our line railroad.

J. K. BARTON

MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Barrels and Shingle Machinery.—R. G. Goodman, Covington, Tenn., wants to purchase machinery for manufacturing flour barrels and shingles.

Bowl Machinery.—C. W. Briggs, Kissimmee, Fla., wants to purchase machinery for manufacturing wooden bowls.

Box and Woodenware Machinery.—James Cash, Cleveland, Tenn., wants to purchase machinery for his box and woodenware factory.

Bridge.—Bids for building a bridge across the Staunton river will be received until April 3 by J. W. Goodwin, Lynchburg, Va., chief engineer Lynchburg & Durham Railroad Co.

Canning Machinery is wanted by P. R. Hay, King's Mountain, N. C.

Canning Machinery.—F. P. McElroy, Dade City, Fla., wants the address of manufacturers of canning machinery.

Canning Machinery.—Prices of canning machinery, (cash) are wanted by the Drew County Canning Co., Monticello, Ark.

Canning Machinery.—The West Point Co-operative Trade & Manufacturing Co., West Point, Miss., solicit correspondence with manufacturers of machinery for canning factories; also with parties skilled in the business.

Canning Machinery.—Canning machinery is wanted by J. E. Jackson, Amherst, Va.

Corrugated Iron.—Prices of corrugated iron is wanted by James Cash, Cleveland, Tenn.

Cotton Mill Machinery.—The King's Mountain Manufacturing Co., King's Mountain, N. C., want to buy an 80-horse-power engine; a 100-horse-power boiler, and a full outfit of machinery, (from 1,200 to 2,000 spindles) for spinning cotton. They want to spin as fine as No. 30 yarn. Also want to purchase machinery for coloring and stamping cloth.

Engine and Boiler.—D. A. Creal, Brenman, Ga., wants a 16-horse-power engine and tubular boiler.

Engines.—Proposals for furnishing three 77-horse-power Armington & Sims' compound condensing engines; one 30-horse-power Armington & Sims' single expansion engine, and one 20-horse-power Armington & Sims' single expansion engine will be received until April 20 by James Fulton, paymaster U. S. Navy, Washington, D. C.

Iron Wire.—Proposals for 20 miles of B. W. G. galvanized iron wire, No. 14, will be received until April 20 by A. W. Greely, Signal Office, Washington, D. C.

Machinery and tools for machine shop will be wanted by Finley & Fields, Dalton, Ga.

Machinery for making small tapered tubes of iron or steel is wanted by the Pittsburg Novelty Co., P. O. box 433, Pittsburg, Pa.

Mining Machinery.—S. J. Tulford, Alexander, Texas, wants catalogue and price lists of machinery for opening a coal mine.

Pipe.—W. W. Lambert, Nottingham, Ala., wants prices on 2 miles of 1 1/4-inch pipe, new or second-hand.

Will Double Capacity.

LOUISVILLE, KY., March 19, 1888.

Editor Manufacturers' Record:

The Globe Fertilizer Co. will double its capacity this year.

To Build Cotton Factory.

KING'S MOUNTAIN, N. C., March 19, 1888.
Editor Manufacturers' Record:

We are going to build a cotton factory. We will want to buy an 80 horse power engine and 100 horse power boiler, and a full outfit for spinning cotton. We want to start with from 1,200 to 2,000 spindles. Wish to buy machinery to spin as fine as No. 30 yarn. We also want to buy machinery for coloring and stamping cloth.

KING'S MOUNTAIN MFG. CO.

W. A. MAUNEY, Pres.

Canning Factories.

WILNA, MD., March 20, 1888.

Editor Manufacturers' Record:

We are building a canning house for Mr. John R. Price, of Wilna. He talks of fitting up with steam; he has not bought yet Mr. W. E. Robinson & Bro., of Vale, are going to build a canning house also. I think they will buy new machinery. August Martin, of Fallston, is building a large canning house. D. Lewis is contractor. He proposes to buy new outfit.

CLAYTON & GROSS.

Canning Factory.

WEST POINT, MISS., March 17, 1888.

Editor Manufacturers' Record:

The West Point Co-operative Trade & Manufacturing Co., organized a short time ago, intend putting up a canning factory. Would like to correspond with manufacturers of machinery and appliances for such a business, and also with a party or parties skilled in the preservation of fruits and vegetables.

JOHN HENDERSON, Sec'y.

Will Rebuild Pottery.

BRAXTON C. H., W. VA., March 17, 1888.

Editor Manufacturers' Record:

We will rebuild our pottery immediately, erecting a three-story building 30x40 feet.

RUSSELL & POOL.

To Build Saw and Planing Mill.

NOTTINGHAM, ALA., March 17, 1888.

Editor Manufacturers' Record:

Mr. J. S. Blackburn and myself will erect a large saw and planing mill near Childersburg, Ala. Expect to be ready for operation about April 15th.

W. W. LAMBERT.

Contemplate Building Dummy Railroad.

NASHVILLE, TENN., March 14, 1888.

Editor Manufacturers' Record:

If we are successful in getting our charter through city council, will build standard gauge dummy road as quick as money will build it.

NASHVILLE & MT. OLIVET RAILWAY CO.

Will Extend Railroad and Build Saw Mill.

NORMANDALE, GA., March 18, 1888.

Editor Manufacturers' Record:

We expect to change gauge of our railroad from 3 feet 6 inches to 4 feet 9 inches April 15th next, and extend in near future present length 30 miles. Also build a saw mill in next four months, capacity 50 M. feet daily.

NORMANDALE LUMBER CO.

GREENVILLE, S. C., March 13, 1888.

Editor Manufacturers' Record:

We expect to begin the manufacture of pants. Corporation will be the Greenville Pants Manufacturing Co. Officers will be L. M. McBee, president and treasurer, and J. H. Morgan, vice-president.

L. M. MCBEE.

Mississippi Notes.

Agricultural and Manufacturing Items.

Special correspondence MANUFACTURERS' RECORD | ABERDEEN, MISS., March 17, 1888.

The Horticultural Association of Prentiss county has determined to establish a canning factory at Boonville next year. It would have been started this season had the matter been agitated a few weeks sooner.

The Water Valley cotton yarn mills have recently declared a dividend of twenty-eight per cent.

The New Orleans and North Eastern Car Works, at Meridian, are now building forty box-cars, the first ever built in that town.

The Natchez Gas Co. last week declared a dividend of eight per cent. upon its stock.

The receipts of cotton at Natchez for the season up to March 8, amounted to 44,404 bales, against 39,458 to corresponding date in 1887.

Colman's Rural World, which is authority on such subjects, says: "On the whole the general supply of strawberries this season will be the lightest for a number of years. The Mississippi berry crop will be about an average one. The vegetable crop in most of the Southern States will be a very large one. Mississippi and Louisiana will have fully double the output of any former year."

The Crystal Springs Meteor, published at the town that may be regarded as the headquarters of horticulture in Copiah county, has this to say in regard to the outlook in that vicinity:

"A thousand or more of fruit and vegetable growers are busy in the gardens and fields; a hundred operatives are working full time in the box factory, turning out 7,000 packages daily; the canning factory will, when completed, give employment to two hundred and fifty operatives; the Earle Thomas Co., when ready for packing, will give employment to over one hundred people, and over one thousand berry and pea pickers are impatient to commence work. Fully three thousand men, women and children will be employed in harvesting, packing, canning and marketing the immense crop this year. Without fear of successful contradiction we claim that no place in the broad South will rival Crystal Springs or even approach her, in animation, volume of horticultural products and industrial activity."

Mr. Dan Phelan, of Vicksburg, will make extensive additions to his carriage manufactory this spring, doubling its capacity.

Messrs. C. M. Flanagan & Co., the extensive millers and provision dealers, who removed to St. Louis some fifteen years ago, after making a fortune in Vicksburg, have opened an extensive wholesale branch in the latter city, and are about to erect two large warehouses.

The fine chime of ten bells, manufactured in Baltimore for St. Paul's Cathedral, in Vicksburg, has been mounted in the belfry, and on Monday, the 12th inst., the ceremony of blessing them was conducted by Bishop Jansens, in the presence of an immense concourse. The citizens of Vicksburg, without regard to sect, turned out to do honor to the occasion.

The following extract from an interview published in the Meridian News will give your readers some additional ideas in regard to the sheep industry and "sheep walks" of South Mississippi, so often referred to in these notes: "Mr. John P. Davis, of Henderson, Wayne county, who is a reliable and successful grower and dealer in wool, states that there are about ten thousand native sheep which occupy, say a scope of country embracing about ten miles in circumference, with Henderson.

son as a common center, which require no attention whatever, not even salting until the general 'round up' for the fall and spring shearing, and that the sheep live and increase with no other sustenance through the winter than such as can be found in the open pine woods. There appears to be a sort of Arcadian simplicity and honesty among the 'sheep men' of that country which is indeed refreshing and commendable. In the general 'round up' when a 'bunch of sheep' belonging to a neighbor is herded the owner (whose mark is always registered) is either advised of the fact or his sheep sheared and his wool scrupulously kept, subject to his order. If the 'stray' lot is large it is usually 'turned out' after notification to the owner, but if small they are sheared along with the remainder. The people who are engaged in this industry can find a market, Mr. Davis says, for their wool right at their doors at say from 28 to 30 cents per pound, and they are now engaging largely in fruit culture besides, which promises to become highly profitable in the near future."

Meridian is considering the matter of going extensively into asphalt street paving.

The first shipment of cucumbers of the season from our south coast was made to Chicago on the 3rd of March.

Mr. Wm. Sigerson, of Jackson county, on the south coast, writes as follows to the Stock Journal: "I have put out 10,000 Herbremont grape vines this spring and will start a very large orchard next spring. I will plant this spring 50,000 fig shoots, and as soon as they are large enough will set them out in a 50 acre orchard. I have discovered the wonder'ul fig tree planted in the old fort at Scranton in 1870; it is living yet, and is, to a man who has a taste for horticulture, the wonder of the world. It bears three good crops in the season—May, August and October." Your correspondent referred to this wonderful tree in his notes last winter.

Mr. Sigerson has a neighbor who has a scuppernong grape vine, covering an area of 4,000 feet of arbor, from which he gathered last season grapes enough to make 400 gallons of wine which netted him \$800. The vine is annually improving. Another neighbor has made from the Herbremont grapes 3,000 gallons of wine to the acre. He says: "I am a new man here, but I am watching these results, and if we were to hear of something of this kind in California we would hold up our hands in wonder."

The Starkville Stock Journal says: "There are more than double the number of breeders of fancy poultry in Mississippi that there were one year ago. Nearly every town has two or three enterprising persons who pay more than ordinary attention to raising fine fowls."

The shipments of lumber from the port of Pascagoula, on our south coast, for the week ending March 15th, were as follows:

| | |
|---------------------------|-----------|
| To Vera Cruz, Mexico..... | 690,552 |
| To Plymouth, Eng..... | 474,810 |
| To Greenock, Eng..... | 1,010,425 |
| Total..... | 2,144,787 |

This does not include shipments coastwise and to New Orleans via the Lake and Mississippi river.

The Moss Point mills report logs in abundance.

The Vicksburg Herald says: "No country was ever settled faster than the Yazoo delta is now being settled and developed." This is saying a great deal.

There is not a town in the State that is not ready to donate an eligible site to any company or individual who will erect a factory upon it.

The Meridian Ice Co. is building a huge establishment for a factory, 50x140 feet in area and two stories in height, and it is expected to be in operation by the 1st of May.

The cotton receipts at Greenville for the season, up to March 8th, amounted to 46,788 bales, against 32,247 bales to corresponding date in 1887.

An organization is being effected in the northern part of Warren county that will next season erect a canning factory and enter extensively into truck farming for export.

Greenville is negotiating for the machinery for a cotton factory, and expects soon to make this addition to her numerous progressive industries. That town has just purchased the plant for a steam laundry, and will have it in full operation at an early day.

The Southern brewery company of New Orleans, has established a general distributing warehouse at Greenville for the benefit of its trade in the delta country.

Literary Notes.

APROPOS of the recent agricultural and mineral development in Northeast Alabama, we have received an interesting supplement issued by the Democrat, Guntersville, Ala., which is replete with practical information for the home seeker and for the capitalist looking for profitable investment. Sample copies may be had free on application.

MR. KENNAN'S Siberian papers, illustrated by Mr. G. A. Frost, who accompanied Mr. Kennan on his trip through Asiatic Russia, will begin in the May Century. Their appearance has been deferred on account of the author's desire to group in preliminary papers, the last of which will be in the April Century, an account of the conditions and events in Russia directly related to the exile system. This system is now to be minutely described and elaborately pictured, and by way of preface to the first illustrated paper Mr. Kennan will, in a brief statement, answer the question as to how he came to enter upon his arduous and somewhat perilous investigations, and why he and his companion were accorded such extraordinary facilities by the Russian government itself. In the April Century Mr. Kennan will write of "The Russian Penal Code."

FRANK LESLIE'S SUNDAY MAGAZINE for April marks the fact of its being an Easter number by a fine hymn tune, "Christ is Risen," by C. Wenham Smith, and two Easter poems, viz., "Easter—Beside a Tomb," by Myra Harper Lockett, and "Easter Flowers," by Maria A. Agur. The story "His Banner Over Me" comes to a happy conclusion, and a new story by George MacDonald entitled "The Elect Lady" is begun. There is a short article by the Rev. George W. Nichols, "Recollections of College Life at Yale Fifty Years Ago," full of curious reminiscences interesting to all Yale graduates. "A Railway Train and What It Costs," by Arthur Vaughan Abbot, and "What our Modern Books Grew From," by Ingersoll Lockwood, are both profusely illustrated and very interesting. "The Pope's Golden Jubilee" is also well illustrated. A portrait appears of the Rev. Dr. Patton, the new president of Princeton, and the new edifice of the First Reformed Dutch Church of Brooklyn presents an attractive appearance. A full page illustration is also given of the new Reredos and Altar of St. Paul's Cathedral, London. As usual in this magazine, there are many short articles and an abundance of illustrations, both large and small.

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises, and needing machinery or supplies of any kind, will find it profitable to consult the advertising columns of the MANUFACTURERS' RECORD. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

What Organization Can Do for a Town.

Many towns in the South are seeking to attract attention and to make their advantages known to the world. We have repeatedly urged the importance of business organization to effect this. A well-managed Board of Trade or Bureau of Information can do an immense amount of good in this line. The business men of every town in the South ought to unite, and through such an institution push forward the interests of their locality. The value of work of this character is fully appreciated in the West, and one illustration of what it can accomplish is shown in the first annual report, just published, of the secretary of the Merchants' and Manufacturers' Bureau of Kansas City.

This bureau was organized the 1st of December, 1886. The object of the organization was declared to be 'the encouragement and fostering of mercantile and manufacturing enterprises.' The membership fees were established at \$25 per annum, and in course of a year 181 members subscribed and paid in this amount, making an aggregate of \$4,525.

The secretary states in his report that his first work was the compilation of a little pamphlet of sixteen pages, containing the names and addresses of all the wholesale merchants and manufacturers of the city. The object of this publication was to inform citizens and retail dealers "who now send to other cities for goods that they can supply themselves as well at home, and at the same time do their part towards encouraging and fostering enterprises that will thus be enabled in turn to aid in giving our city that permanence which alone can come from such mutual support." Of this pamphlet 5,000 copies were printed and distributed, the distribution being confined to the principal families of the city, and the retail dealers of the city and the neighboring towns.

The next work of the secretary was the preparation of a pamphlet of 116 pages entitled, "The Advantages of Kansas City as a Manufacturing and Mercantile Centre." Five thousand copies of this pamphlet were published and distributed, in part by the real estate dealers and bankers of the city, but principally by the bureau itself. Accompanying this interesting pamphlet were maps of Kansas City and the environs, showing the principal suburban towns on both sides of the Missouri river, with their railroads and other advantages. Circulars were sent to all the local capitalists and owners of suburban property, requesting them to notify the secretary of such property as they wished to offer to manufacturers and wholesale merchants, with any inducements they might be disposed to hold out in the way of donations, reduction in prices, leases, subscriptions of stock, etc. To these circulars many liberal responses were made, which were duly recorded and numbered in a book kept for that purpose. The wants of local manufacturers and merchants in the way of additional capital, partners, bookkeepers, etc., were also numbered, recorded and made public in the same way. These bulletins were distributed to all inquirers, whether by mail or visiting the secretary's office.

In addition to this, frequent notices of the bureau and its work were printed in the papers of the city, and the secretary says, "within a very few days it was no small task to answer the letters and attend to the visitors who called at the office." During the year 25,000 pamphlets, maps, circulars and newspapers have been distributed. The members of the bureau are allowed free access to its records and real estate men especially have found them of great value in making up lists of persons to whom to send their own circulars.

And now let us see what are some of the results of this year's work. After stating that the number of merchants and manufacturing concerns known to have been induced by the bureau to locate in or adjoining to

the city within the past year is not less than thirty-five, the secretary says: "It is estimated that these various establishments, when completed and in operation, will not have cost less than \$1,500,000, and that they will give steady employment to something like 5,000 men, and support nearly or quite 25,000 people. This is probably an underestimate rather than an overestimate. At all events these establishments will add considerable wealth and population to our city, and what is equally important, will render permanent the growth and prosperity we so much pride ourselves upon. And I do not hesitate to claim that if this bureau could show a clear title to only a single one of these manufacturing enterprises just referred to, it alone would be a paying result of the expenditure of the \$4,525 that we have invested in it during the past year."

Gadsden's Prosperity.

A correspondent of the Birmingham Age in a recent letter from Gadsden says:

At its last meeting the directory of the land and improvement company resolved to build at once the elegant hotel on Bellevue Cliffs which has been the subject of so much talk. Besides this they will begin at once the construction of a trolley line connecting the city with the hotel and the falls, a short distance beyond. It will be a standard gauge, serving as a belt road for saw mills, furnaces, car works, etc., and connecting with the Queen & Crescent main line at Attalla. It is estimated by the wisest business men that the freight business of this line alone will cover all expenses of running, besides leaving a good margin and the gross passenger receipts as net profit. When it is remembered that 250 tons of ore will be handled to the furnaces daily and half as much pig iron; that the saw mills will send over the line about 10 car-loads of freight each day, it is easy to see what a good investment this road will prove. About two-thirds of the road-bed is ready for ties and rails. It will be of incalculable benefit to Gadsden.

The writer was here last November when the Anniston & Cincinnati Railroad has crossed the river on its stately iron bridge, and, penetrating the heart of the city, linked itself to the Queen & Crescent at Attalla. Within the same period the Elliott Car Works began the construction of 300 cars, which were on their order books the day they opened business.

Mr. Geo. F. Dickey has closed negotiations with Northern capitalists to begin at once the construction of 200 tenement cottages on lots which the enterprising citizens of Gadsden have donated for that purpose.

The largest dealer in Southern leather in Boston is concluding arrangements to open a tannery in the city to supply Eastern markets.

The depot of the Anniston & Cincinnati Railroad is under cover, and Riddle's iron warehouse is nearly finished.

It takes booms or rumors of booms to keep some places going, but in Gadsden it grows and grows in and out of boom seasons. Your correspondent is thoroughly familiar with the iron districts of the New South, and he is willing to place himself on record as saying that there is no fever in it when there are few croakers than in Gadsden, nor any place where the faith in the eventual outgrowth of the town is more abiding.

Cotton Yarns and Warps.

| | |
|-----------------|----------|
| Single skeins: | |
| 6s to 10s..... | 16 @15% |
| 12s to 20s..... | 17 @15% |
| 20s to 26s..... | 18 @15% |
| 30s..... | 22 @15% |
| 40s..... | 25 @15% |
| 50s..... | 28 @15% |
| 60s..... | 30 @15% |
| 70s..... | 32 @15% |
| 80s..... | 34 @15% |
| 90s..... | 36 @15% |
| 100s..... | 38 @15% |
| 120s..... | 40 @15% |
| 140s..... | 42 @15% |
| 160s..... | 44 @15% |
| 180s..... | 46 @15% |
| 200s..... | 48 @15% |
| 220s..... | 50 @15% |
| 240s..... | 52 @15% |
| 260s..... | 54 @15% |
| 280s..... | 56 @15% |
| 300s..... | 58 @15% |
| 320s..... | 60 @15% |
| 340s..... | 62 @15% |
| 360s..... | 64 @15% |
| 380s..... | 66 @15% |
| 400s..... | 68 @15% |
| 420s..... | 70 @15% |
| 440s..... | 72 @15% |
| 460s..... | 74 @15% |
| 480s..... | 76 @15% |
| 500s..... | 78 @15% |
| 520s..... | 80 @15% |
| 540s..... | 82 @15% |
| 560s..... | 84 @15% |
| 580s..... | 86 @15% |
| 600s..... | 88 @15% |
| 620s..... | 90 @15% |
| 640s..... | 92 @15% |
| 660s..... | 94 @15% |
| 680s..... | 96 @15% |
| 700s..... | 98 @15% |
| 720s..... | 100 @15% |
| 740s..... | 102 @15% |
| 760s..... | 104 @15% |
| 780s..... | 106 @15% |
| 800s..... | 108 @15% |
| 820s..... | 110 @15% |
| 840s..... | 112 @15% |
| 860s..... | 114 @15% |
| 880s..... | 116 @15% |
| 900s..... | 118 @15% |
| 920s..... | 120 @15% |
| 940s..... | 122 @15% |
| 960s..... | 124 @15% |
| 980s..... | 126 @15% |
| 1000s..... | 128 @15% |
| 1020s..... | 130 @15% |
| 1040s..... | 132 @15% |
| 1060s..... | 134 @15% |
| 1080s..... | 136 @15% |
| 1100s..... | 138 @15% |
| 1120s..... | 140 @15% |
| 1140s..... | 142 @15% |
| 1160s..... | 144 @15% |
| 1180s..... | 146 @15% |
| 1200s..... | 148 @15% |
| 1220s..... | 150 @15% |
| 1240s..... | 152 @15% |
| 1260s..... | 154 @15% |
| 1280s..... | 156 @15% |
| 1300s..... | 158 @15% |
| 1320s..... | 160 @15% |
| 1340s..... | 162 @15% |
| 1360s..... | 164 @15% |
| 1380s..... | 166 @15% |
| 1400s..... | 168 @15% |
| 1420s..... | 170 @15% |
| 1440s..... | 172 @15% |
| 1460s..... | 174 @15% |
| 1480s..... | 176 @15% |
| 1500s..... | 178 @15% |
| 1520s..... | 180 @15% |
| 1540s..... | 182 @15% |
| 1560s..... | 184 @15% |
| 1580s..... | 186 @15% |
| 1600s..... | 188 @15% |
| 1620s..... | 190 @15% |
| 1640s..... | 192 @15% |
| 1660s..... | 194 @15% |
| 1680s..... | 196 @15% |
| 1700s..... | 198 @15% |
| 1720s..... | 200 @15% |
| 1740s..... | 202 @15% |
| 1760s..... | 204 @15% |
| 1780s..... | 206 @15% |
| 1800s..... | 208 @15% |
| 1820s..... | 210 @15% |
| 1840s..... | 212 @15% |
| 1860s..... | 214 @15% |
| 1880s..... | 216 @15% |
| 1900s..... | 218 @15% |
| 1920s..... | 220 @15% |
| 1940s..... | 222 @15% |
| 1960s..... | 224 @15% |
| 1980s..... | 226 @15% |
| 2000s..... | 228 @15% |
| 2020s..... | 230 @15% |
| 2040s..... | 232 @15% |
| 2060s..... | 234 @15% |
| 2080s..... | 236 @15% |
| 2100s..... | 238 @15% |
| 2120s..... | 240 @15% |
| 2140s..... | 242 @15% |
| 2160s..... | 244 @15% |
| 2180s..... | 246 @15% |
| 2200s..... | 248 @15% |
| 2220s..... | 250 @15% |
| 2240s..... | 252 @15% |
| 2260s..... | 254 @15% |
| 2280s..... | 256 @15% |
| 2300s..... | 258 @15% |
| 2320s..... | 260 @15% |
| 2340s..... | 262 @15% |
| 2360s..... | 264 @15% |
| 2380s..... | 266 @15% |
| 2400s..... | 268 @15% |
| 2420s..... | 270 @15% |
| 2440s..... | 272 @15% |
| 2460s..... | 274 @15% |
| 2480s..... | 276 @15% |
| 2500s..... | 278 @15% |
| 2520s..... | 280 @15% |
| 2540s..... | 282 @15% |
| 2560s..... | 284 @15% |
| 2580s..... | 286 @15% |
| 2600s..... | 288 @15% |
| 2620s..... | 290 @15% |
| 2640s..... | 292 @15% |
| 2660s..... | 294 @15% |
| 2680s..... | 296 @15% |
| 2700s..... | 298 @15% |
| 2720s..... | 300 @15% |
| 2740s..... | 302 @15% |
| 2760s..... | 304 @15% |
| 2780s..... | 306 @15% |
| 2800s..... | 308 @15% |
| 2820s..... | 310 @15% |
| 2840s..... | 312 @15% |
| 2860s..... | 314 @15% |
| 2880s..... | 316 @15% |
| 2900s..... | 318 @15% |
| 2920s..... | 320 @15% |
| 2940s..... | 322 @15% |
| 2960s..... | 324 @15% |
| 2980s..... | 326 @15% |
| 3000s..... | 328 @15% |
| 3020s..... | 330 @15% |
| 3040s..... | 332 @15% |
| 3060s..... | 334 @15% |
| 3080s..... | 336 @15% |
| 3100s..... | 338 @15% |
| 3120s..... | 340 @15% |
| 3140s..... | 342 @15% |
| 3160s..... | 344 @15% |
| 3180s..... | 346 @15% |
| 3200s..... | 348 @15% |
| 3220s..... | 350 @15% |
| 3240s..... | 352 @15% |
| 3260s..... | 354 @15% |
| 3280s..... | 356 @15% |
| 3300s..... | 358 @15% |
| 3320s..... | 360 @15% |
| 3340s..... | 362 @15% |
| 3360s..... | 364 @15% |
| 3380s..... | 366 @15% |
| 3400s..... | 368 @15% |
| 3420s..... | 370 @15% |
| 3440s..... | 372 @15% |
| 3460s..... | 374 @15% |
| 3480s..... | 376 @15% |
| 3500s..... | 378 @15% |
| 3520s..... | 380 @15% |
| 3540s..... | 382 @15% |
| 3560s..... | 384 @15% |
| 3580s..... | 386 @15% |
| 3600s..... | 388 @15% |
| 3620s..... | 390 @15% |
| 3640s..... | 392 @15% |
| 3660s..... | 394 @15% |
| 3680s..... | 396 @15% |
| 3700s..... | 398 @15% |
| 3720s..... | 400 @15% |
| 3740s..... | 402 @15% |
| 3760s..... | 404 @15% |
| 3780s..... | 406 @15% |
| 3800s..... | 408 @15% |
| 3820s..... | 410 @15% |
| 3840s..... | 412 @15% |
| 3860s..... | 414 @15% |
| 3880s..... | 416 @15% |
| 3900s..... | 418 @15% |
| 3920s..... | 420 @15% |
| 3940s..... | 422 @15% |
| 3960s..... | 424 @15% |
| 3980s..... | 426 @15% |
| 4000s..... | 428 @15% |
| 4020s..... | 430 @15% |
| 4040s..... | 432 @15% |
| 4060s..... | 434 @15% |
| 4080s..... | |

Steel Thimble Roller Chain Belting.

We herewith illustrate the thimble roller chain manufactured by the Jeffrey Manufacturing Co., of 121 West State street, Columbus, Ohio. This form of chain is made of machinery steel, and is one of the strongest and most durable chains in the market for heavy transmis-

sions than is estimated, will not be that they are something or quite under-
At ill add to our
And I
bureau
single one
just re-
result of
that we
ear."

done after the belt has been sold and put into use; for by this machine a belt is subjected to the same experience that it receives in actual use.

In this machine, as illustrated above, a roll of belting is shown in process of testing and stretching. At the right of the machine stands a roll from which a part has already been drawn off. At the left of the machine the belt is being wound upon

gether as a main pulley upon a main counter-shaft. They are propelled by the three gears III. worked by a belt running upon a tight and loose pulley, as shown in the sketch. These three large pulleys, simply by the force of traction, just as the belt is driven when in use, draw the belt forward over the resistance rolls ff and the other rolls mm. After the belt leaves the three rolls M M M it is wound upon a

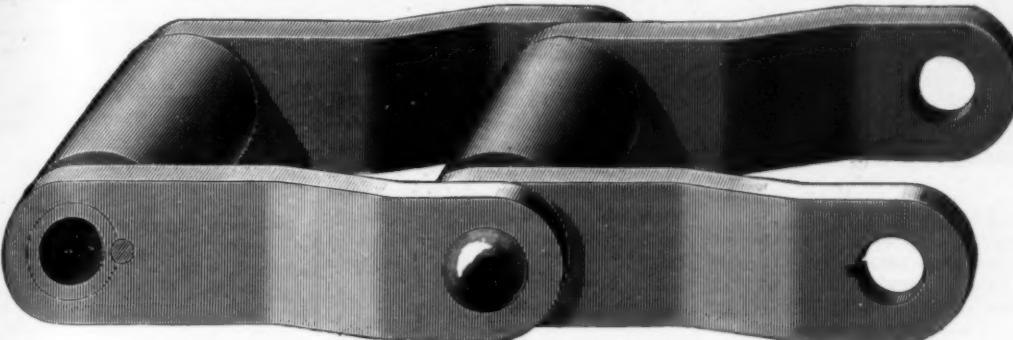


FIG. 1.—STEEL THIMBLE ROLLER CHAIN BELTING.

sions of power, especially where the chains are subject to jerks or sudden tensions, which would break chains made of malleable iron or other materials, causing very often annoying as well as serious delays and damage. All of this is overcome by the use of steel roller chains, as each part being well proportioned and as only the best material is used in their construction, there are no flaws or shrinkages to contend with. The side bars in this chain are offset and spaced by means of the thimble which also forms the bearing for the pin and upon which the roller is mounted.

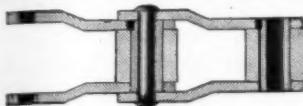


FIG. 2.—SECTIONAL VIEW

The pins are held from turning by means of a projection, so there is no wear on the ends of the outside links, the wearing surface extending full length between the outside links. This chain is made in strength capable of transmitting from 10 to 100 horse-power, and is not an experiment, as it has been in use the past two years with good results. The Van Depole system of electric street cars use it on all of their electric cars, as well as many other manufacturing industries for driving traction engines, pole-road locomotives, steamboats, etc.

Belt Stretching and Testing Machines.

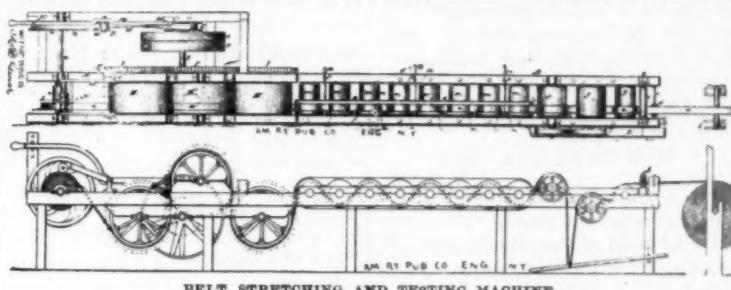
All users of belting have experienced the trouble caused by a large amount of stretching in belts that takes place when the belts are new and first put into use. Various means have been resorted to in times past to remedy this trouble by special processes in the stretching of the leather before the leather was "made up" into belts, and by these means belts do not stretch at present as much as they did formerly; but it was not until very recently that methods have been found by which belts after being made could be properly tested, and a very large per cent. of the stretch taken out, which after all that has been done in the process of manufacture still occurs after belts are put into use.

We publish herewith an illustration of a machine on which George F. Page, president of the Page Belting Co., has recently secured a patent, the patent being dated Nov. 20, 1887. The machine is shown both in plan and elevation. The object of this machine is to accomplish (after the belt is "made up" into rolls) the testing and stretching, which heretofore has been

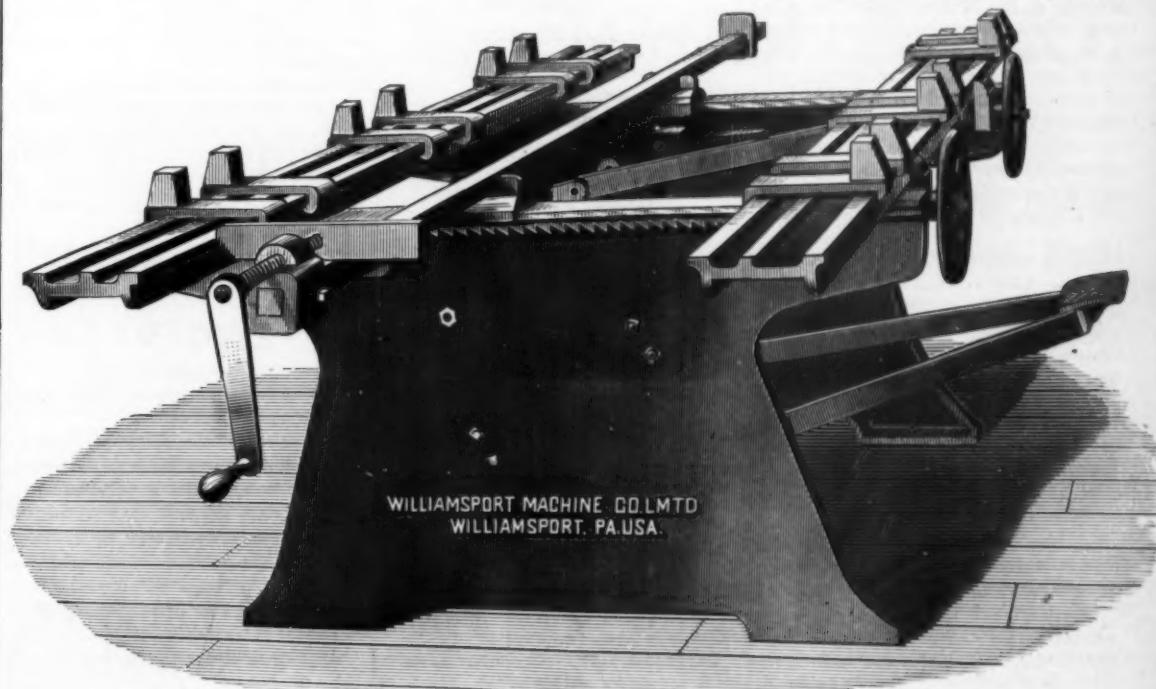
a spindle as it passes through the machine. It will be seen that a belt passes through some tension rolls at the extreme right, after which it passes over a large roll marked g, then under one and over another large roll marked ff. With these rolls at the side of the machine are connected two pulleys, over which a brake passes, connected with the lever D, and by means of this brake jacked down to any tension de-

spindle upon the left, as shown. This is not driven by a strong tension, but just enough to wind the belt as it passes through the machine, and at the same time it does serve to keep the belt in contact with the rolls M M M.

By this process the belt has a steady, uniform motion from one end to the other as it passes through the machine. The manipulations of the belt over and under



BELT STRETCHING AND TESTING MACHINE.



NEW SINGLE MOTION DOOR AND BLIND CLAMP IMPROVED.

sired. These two rolls ff act as a counter shaft upon which the belt runs. The friction upon the pulleys at the side in the frame represents the load or work given to the belt. To more completely accomplish the resistance and the stretching and the testing, the belt passes over and under alternately the rolls mm, thence under two and over one of the three large rolls marked M M M. These large rolls act to

the various rolls, together with the strain caused by the resistance rolls, tests it in every part as to strength, stretching of the laps, straightness, etc. Just as the belt is tested when put into use, at the same time it removes a large amount of stretch that cannot be removed in the process of manufacture by stretching the leather before being "made up" into belts.

The great advantages offered in belts

treated by this machine will be apparent to every user of belting, for all have had experience as to the losses and annoyances occasioned by the stretching which takes place when first put into use, and anything which will save a large part of this loss and annoyance will be gladly welcomed by machinists and mill men.

This machine is in use at the factory of the Page Belting Co., of Concord, N. H. In practice the belt is run through the machine several times, first one end forward, then the other, so that it is as thoroughly tested and stretched as possible, and this work is done by the Page Belting Co. after their leather, having been cut into narrow pieces, has been thoroughly stretched twice in the manufacture before it is "made up" into belts. It is designed to accomplish what its name implies, "the testing and stretching of belts." The machine has now been in use by the Page Belting Co. long enough to demonstrate its great value as an additional facility to the manufacture of first class leather belts.

The Page Belting Co. have issued a very handsome and complete catalogue of their belting and lace leather. This catalogue not only describes the different grades of goods they manufacture, but also the kinds and grades of belting best adapted to the different kinds of work. It is a valuable catalogue, and can be had by any one on application to the Page Belting Co., of Concord, N. H.

New Single Motion Door and Blind Clamp "Improved."

The Williamsport Machine Co., Limited, manufacturers of improved wood-working machinery, Williamsport, Pa., are the makers of the door and blind clamp shown in the accompanying engraving.

The machine is made of entire new patterns of new design. It is distinguished, the manufacturers say, for its being the most substantial and quick-adjusting clamp in the market, and every practical door maker will see at a glance its advantages, as it can be changed from an inside blind to a 4 foot 4-inch door by simply raising up the adjustable slab and sliding the same back. This is very quick and accurate adjustment, from having to adjust four feet by means of screw and small hand wheel; and another important feature of this clamp is the construction of the levers, as they get the most pressure or the hardest squeeze when the stile is up to the shoulder; it being self-acting, holds secure until the foot lever is raised. The front slab also has an independent adjustment

Memoranda for a Hotel and Land Company.

Barnwell, Village, in the upper Pine Belt of South Carolina, has a high and healthy situation, 100 miles by railway from Charleston, and about 70 miles in a direct line from the sea.

It is 225 feet above sea level; pure and abundant water is had from wells thirty to forty feet deep, and its climate is mild and equable. Its winters are peculiarly adapted to invalids; not so bleak as Aiken, which has near 400 feet more altitude, and more bracing than the climate of the coast of South Carolina or points further southward. The following table exhibits its winter meteorology averaged upon three years' observation:

| Month | Thermometer Sun. Noon. | Rain and Frost. | | | No. of Days. |
|--------|---------------------------|-----------------|--------------|---------------|-----------------|
| | | Average Mean. | Highest Sun. | Lowest Noont. | |
| Nov. | 47 | 61 | 55 | 52 | 3 |
| Dec. | 39 | 52 | 56 | 78 | 20 |
| Jan. | 32 | 52 | 58 | 72 | 18 |
| Feb. | 37 | 58 | 58 | 76 | 20 |
| Mar. | 45 | 57 | 58 | 76 | 10 |
| April. | 54 | 64 | 65 | 83 | 22 |
| | 56 | 71 | 72 | 90 | 5 |
| | 56 | 71 | 72 | 90 | 0 |

There was no snow or sleet in these years, such seldom occurs, and never lies upon the ground for more than a few hours. The village is the county seat; has some 1,500 inhabitants; a genial and refined society; one of the best equipped graded schools in the State; two newspapers, and places of worship by the Episcopalians, Baptists, Methodists, Presbyterians and Catholics. It has a Bank with a capital of \$60,000 in successful operation, and some enterprising merchants. It is the center of a fine and successful farming country. The land, a light sandy loam, resting on a clay sub-stratum, gently undulating and requiring no artificial drainage. Five thousand bales of cotton were sold here last season. Fruit culture for market is a newly introduced and rapidly extending industry. 230 carloads of melons, valued at \$30,000 net, and 600 crates of peaches were sent to market from the county during the past season.

Barnwell is a terminus of a short railroad connecting with the South Carolina Railway at Blackville. Two trains daily give access to all points, and telegraphic facilities also exist. The Sherwood Jockey Club has race meetings here, and its grounds at other times afford a fine driving park. Fox hunting and partridge shooting are diversions in much perfection.

It is thought, with the surroundings and facilities thus briefly indicated, that Barnwell affords an opportunity and location desirable for a large hotel for the accommodation of Northern and Northwestern visitors, and that in this connection a land and immigration scheme may be profitably conducted. At Aiken and elsewhere in this region, which is frequented in winter by Northern visitors, the accommodations are good, but at rates which rich people alone can afford, while unfortunately weak health is confined to no class.

The proposed hotel at Barnwell should be properly constructed and thoroughly comfortable, but in a style admitting of reasonable rates of board. The object should be to attract persons of moderate means, whose finances do not admit of annual migration, and who, once made acquainted with the country, would perhaps desire to exchange for it the severity of the Northern climate.

The hotel should be managed by a Northern man, one familiar with the taste and habits of his proposed guests. A ten-pin alley, billiard room and livery stable should be kept in connection with it. A pack of fox hounds might also be an addition to the sources of healthful amusement. They could be kept by the livery stable man, and hunted on regular days. To make the enterprise a success Northern as well as home capital should be enlisted.

ESTIMATES.

Farming lands can be bought throughout the county at from three to ten dollars per acre. In the vicinity of Barnwell at from ten to thirty dollars. A ten acre lot near the depot of the railroad can be bought for \$2,000. It is well suited in every respect for the proposed hotel and its adjuncts. Building material and labor is cheap.

PROBABLE OUTLAY.

| | |
|-----------------------------------|----------|
| One acre lot for hotel, say..... | \$ 2,000 |
| House and out buildings, say..... | 19,000 |
| Equipment of hotel, say..... | 10,000 |
| Working capital, say..... | 5,000 |
| Total..... | 36,000 |

Correspondence invited with

MIKE BROWN, Esq.,

Barnwell, S. C.

1819. * 1836. * 1888.

Office of A. WHITE & SONS,

LEICESTER, MASS., March 1, 1888.

To our Friends and Patrons:

For the purpose of providing for our increasing business, and to furnish ourselves with the latest and most improved facilities, we have purchased the valuable "CENTRAL FACTORY" property, with its large building, erected for Card Clothing purposes, which will give us ample land on which to erect additional buildings for the accommodation of A NEW POWER PLANT, and a complete set of smooth and Needle-pointed Grinding Machinery.

To accomplish this, we have consolidated our whole interest with that of the

DECKER & BONITZ CARD CLOTHING CO.

(Incorporated under the laws of Massachusetts. Capital \$130,000.)

of Worcester and Philadelphia, who control certain valuable patents and new special machinery, and whose experience we thus avail ourselves of, and can at once furnish our customers with a line of goods which are commanding the constantly increasing attention of the trade.

MR. DECKER is one of the largest card makers of Europe, which will enable us to be always posted on the latest improvements in the trade introduced abroad.

MR. HERMANN BONITZ will have charge of the new factory, which the company have recently erected in Philadelphia, Pa.

MR. H. ARTHUR WHITE will have charge of the Leicester factory, and the machinery now running in Worcester will be distributed between the two factories, where most needed.

Machinery is now on the way from Germany, made by Mr. Decker for our use here, especially adapted for the handling of tempered steel wire and the special Card Clothing we are making.

We take pleasure in making this announcement, as it will enable us to fill our large existing contracts and future orders entrusted to us promptly, and with the best satisfaction to all concerned.

We take this opportunity to thank you for your valuable assistance and patronage in the past, and confidently solicit your esteemed favors in our new relations.

Respectfully yours,

A. WHITE & SON.

Hereafter—DECKER & BONITZ CARD CLOTHING CO.

H. A. WHITE, AGENT.

ELIAS EDMONDS,
Attorney at Law

SAN ANTONIO, TEXAS.

Makes the Litigation of Land Titles a specialty. Will also Lend Money for non-residents upon the best real estate security.

To Capitalists, Manufacturers & Machinists.

WANTED.

At MORGAN, BOSQUE CO., TEXAS,

A Roller Mill Capacity not less than 100 barrels. Will do-

and \$1,000; or take \$3,000 in stock. Sufficient wheat for said mill can be purchased in our market, and at least one-half of products can be sold at mill. Also, A WOOLEN FACTORY, not less than 12 looms. Will do sufficient grounds and water, and will take one-third stock. Wool for factory can be bought in our town. All products of factory can be sold in Bosque and adjoining counties. We believe 25 to 35 per cent. net profit can be made in each of these enterprises. We have many advantages over any other location. For information address J. W. Gilpin, Mayor, or Thos. F. Lockett, President Morgan Water Works & Ice Co.

Eufaula Manufacturing

—AND—
Improvement Co.

Capital Stock, \$100,000. EUFAULA, ALA.

This Company has been organized for the purpose of AIDING AND ENCOURAGING

Blast Furnaces Wanted.

The Athens Mining & Manufacturing Co., Athens, Tenn., are erecting \$500,000 new manufacturing improvements upon their property, and are opening, with a new railroad, the finest iron fields in the South. They desire to have one or more blast furnaces located at Athens, and make the following offers to iron manufacturers and capitalists:

1. They will donate an excellent site free of cost, and in addition will give \$10,000 cash subsidy upon closing of contract and execution of satisfactory bond for the erection, as soon as practicable, of a furnace with 100 tons daily capacity; or will donate site and subscribe for \$5,000 stock. The same offers are made proportionately for furnaces of less capacity.

2. They will lease the mines upon royalty or will deliver at furnace both red and brown ores, superior in quality to any at present mined in the South, and which will yield not less than 50 per cent. in the furnace, at say \$1.25 to \$1.50 per ton, or anyway 10 per cent. less than ores proportionately rich cost Chattanooga furnaces. They will contract to deliver any number of tons daily. Lowest freight rates will be obtained on manufactured products to markets.

The finest limestone can be had on the property for cost of quarrying.

Coke can be had at Chattanooga prices. Analysis of the ores will be furnished upon application. No place in the United States has better advantages than Athens for the cheap manufacture of superior iron.

The company reserves the right to select any one or two of such propositions as may be received.

Correspondence solicited.

R. J. FISHER, Treas. and Gen'l Man.

GREEN FOREST,
Rockbridge County, Va.

Best location in the State for a Furnace. Vast beds of rich Buena-Vista iron are at hand. Coke at less than three dollars per ton. Eight acres for a site offered FREE on the S. V. R. and the R. & A. Railroad.

Best location for a Paper Mill. Supply of soft wood unlimited. Two acres FREE for a site

Best location for a Woolen Mill. One acre FREE for a site. Large water power available. Write to

B. C. MOOMAW.

EDOUARD SIDEL,
ARCHITECT,
Birmingham, Ala.

Architect of the CALDWELL HOTEL,

The MORRIS BUILDING, etc., etc.

A. HOEN & CO.

LITHOGRAPHERS, BALTIMORE MD.

Our facilities for the production of

ARTISTIC

Color Work

AND ALL STYLES OF

Fine Commercial Engraving

Art Unparalleled.

All work executed under careful and personal supervision at prices consistent with first-class productions. Sole proprietors of the

CELEBRATED

LITHOCALCUT PROCESS

Branch Establishment:

THE HOEN BUILDING, RICHMOND, VA.

WIER & WILSON

DIRECT REPRESENTATIVES:

| | |
|-----------------------------|--|
| HUBBARD & CO. | Axes, Shovels, Hoes and Saws. |
| AMERICAN SCREW COMPANY, | Screws, Bolts, Wire Nails, &c. |
| A. FIELD & SONS, | Tacks, and Nails. |
| WHEELING HINGE COMPANY, | Wrought Goods, Butts, &c. |
| OLIVER BROTHERS & PHILLIPS, | Heavy Hardware. |
| THE SHELTON COMPANY. | Philadelphia Carriage Bolts. |
| J. P. TOLMAN & CO. | Braided Sash Cord. |
| JOHN SOMMERS' SON, | Faucets. |
| NICHOLSON FILE CO. | Files. |
| HARTFORD HAMMER CO. | Hammers and Sledges. |
| THE HENRY C. HART MFG. CO. | Screen Frames, Lull & Porter, Blinds, Spring Hinges, &c. |

| | |
|-----------------------------------|-----------------------------------|
| LAWSON & BRENNER, | Forks. |
| HOLROYD & CO. | Stocks and Dies. |
| BAKER CHAIN & WAGON IRON MFG. CO. | Wagon Hardware, Links, Rings, &c. |
| CLARKE BROS. & CO. | Bolts, Nuts, etc. |

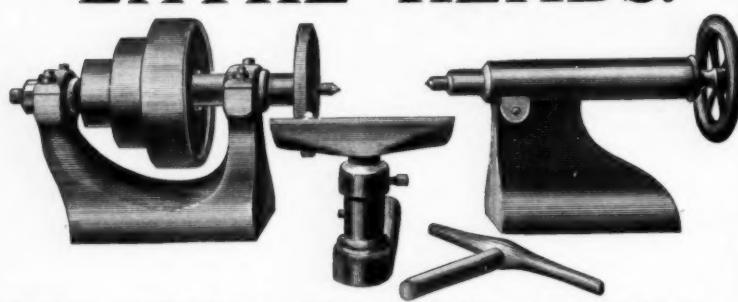
BRANFORD LOCK WORKS.

Office, No. 14 W. German Street,

BALTIMORE, MD.

CHARLES H. WIER.
JOHN H. WILSON.

LATHE MEADS.



FOR WOOD OR IRON TURNING.

STRONG, STIFF, SUBSTANTIAL.

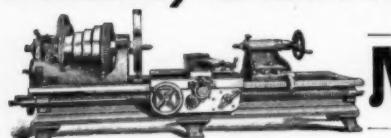
Steel Arbors and Screws, Emery Grinders and Gear Cutting Attachments,

Progress Engine & Machine Works

M. C. R. R. SUMMERFIELD, MD.

HILL, CLARKE & CO.

DEALERS IN



Machine Tools,

ENGINE LATHES,

Iron Planers, Upright Drills,

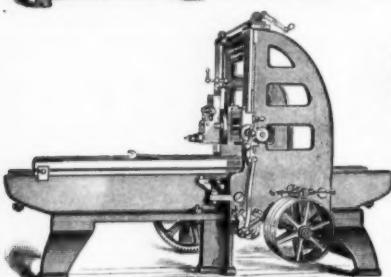
MILLING MACHINES,

Bolt Cutting Machines,

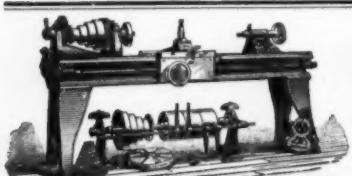
Special Railroad Tools, &c.

156 to 164 Oliver Street, BOSTON, MASS.

BRANCH OFFICE, Bank of Commerce Building, St. Louis, Mo.

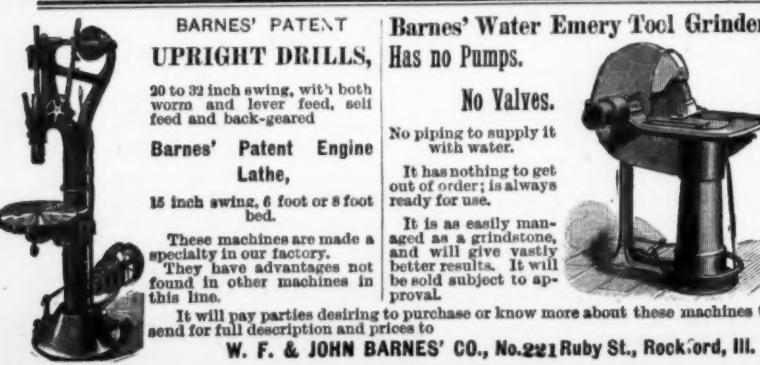


Build and Repair Your Machinery

Established 1845.
T. K. Carey & Bros.
SOUTHERN AGTS.,
Baltimore, Md.BY USING
Engine Lathes, Planers,
Chucking Lathes, Hand Lathes,
AND
MACHINE TOOLS GENERALLY
MANUFACTURED BY
LATHE & MORSE TOOL CO.
Worcester, Mass., U. S. A.17, 24 & 27-INCH
Engine Lathes
New Designs.
THE MULLER MACHINE TOOL CO.
8th and Evans Streets,
CINCINNATI, O.

Sebastian, May & Co.'s Improved Screw Cutting

FOOT AND LATHES POWER

Drill Presses, Shapers, Band, Circular and Scroll
Saws, Machinists' Tools and Supplies. Lathes
on trial. Catalogue mailed on application.
182 West Second Street, CINCINNATI, O.BARNES' PATENT
UPRIGHT DRILLS,20 to 32 inch swing, with both
worm and lever feed, solid
feed and back-gearredBarnes' Patent Engine
Lathe,15 inch swing, 6 foot or 8 foot
bed.These machines are made a
specialty in our factory.
They have advantages not
found in other machines in
this line.It will pay parties desiring to purchase or know more about these machines to
send for full description and prices to

W. F. & JOHN BARNES' CO., No. 221 Ruby St., Rockford, Ill.

Barnes' Water Emery Tool Grinder.
Has no Pumps.No Valves.
No piping to supply it
with water.It has nothing to get
out of order; is always
ready for use.It is an easily man-
aged as a grindstone,
and will give vastly
better results. It will
be sold subject to ap-
proval.It will pay parties desiring to purchase or know more about these machines to
send for full description and prices to

W. F. & JOHN BARNES' CO., No. 221 Ruby St., Rockford, Ill.

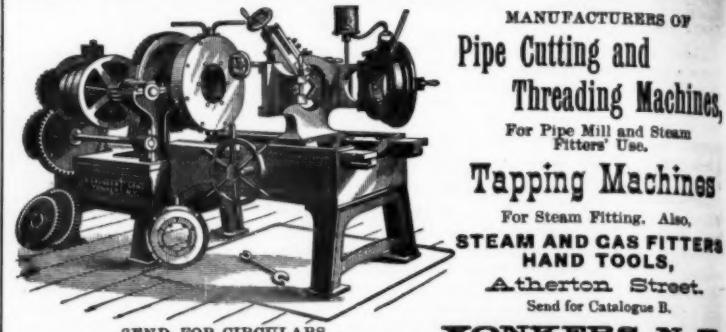
WILLIAM SELLERS & CO. INCORPORATED, PHILADELPHIA, PA.
BUILDERS OF Machine Tools For Working Iron AND Steel.

Improved Turntables for Locomotives, Cars and Pivot Bridges.

High Speed Power Traveling Cranes, and Hand or Power
Swing Cranes. Shafting, Pulleys, Hangers, &c., for transmission
of power. Improved Self-Adjusting Injector of 1876. Self-Acting
Injector of 1887. Fixed Nozzle Automatic Injector of 1885.

Injectors for all conditions of Locomotive and Stationary Service.

D. SAUNDERS' SONS

MANUFACTURERS OF
Pipe Cutting and
Threading Machines,For Pipe Mill and Steam
Fitters' Use.

Tapping Machines

For Steam Fitting. Also,
STEAM AND GAS FITTERS
HAND TOOLS,
Atherton Street.

Send for Catalogue B.

TONKERS. N. Y.



With a manufacturing experience of over half a century, we recommend these machines to be the best, simplest, most durable and combining all the essential elements.

ESTABLISHED 1832

BRADLEY AND COMPANY, SYRACUSE, NEW YORK.

Laundry Machinery.

Largest Stock. Latest Improvements. Fullest Line.

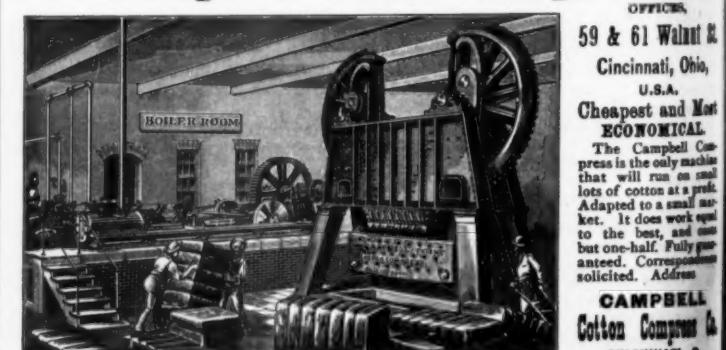
Washing Machines,
Ironing Machines,
Centrifugal Machines,
Mangles, Wringers, &c.
BOILERS AND ENGINES.OUTFITS FOR
Hotels and Public Institutions

A SPECIALTY.

The A. M. DOLPH CO.

224 Washington Street,
CHICAGO, ILL.Cor. 9th St. and Freeman Ave.,
CINCINNATI, O.

The Campbell Cotton Compress Co.

OFFICES
59 & 61 Walnut St.
Cincinnati, Ohio,U. S.
Cheapest and Most
ECONOMICAL.The Campbell Com-
press is the only machine
that will run on small
lots of cotton at a profit.
Adapted to a small mar-
ket. It does work equal
to the best, and less
but one-half. Fully guar-
anteed. Correspondence
solicited. AddressCAMPBELL
Cotton Compress Co.
CINCINNATI, O.

STEEL CASTINGS

From 1-4 to 15,000 lbs. Weight.

True to pattern, sound, solid, free from blow-holes, and of in-
equalled strength. Stronger and more durable than iron forgings
in any position or for any service whatever. 40,000 CRANK SHAFTS
and 30,000 GEAR WHEELS of this steel now running prove the
CRANK SHAFTS and GEARING specialties. STEEL
CASTINGS of every description. Send for circulars and prices toCHESTER STEEL CASTINGS CO.
Office, 407 Library St., Philadelphia.
Works, Chester, Pa.

HOOPES & TOWNSEND,

MANUFACTURERS,



KEYSTONE BOILER RIVETS,

Cold Punched, Chamfered, Trimmed and Drilled Square and Hexagon Nuts.

Finished and Case-Hardened Steel Hexagon Nuts.

BRIDGE RODS and RIVETS.

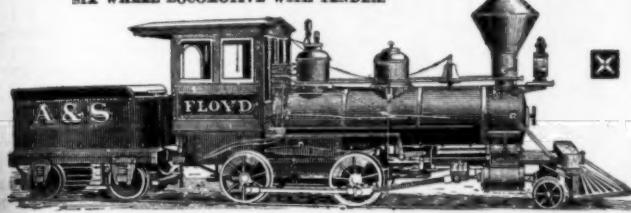
Builders' IRON Work.
TANK and COOPERS' RIVETS.

PHILADELPHIA, PA.

ESTABLISHED IN 1865.

THE RICHMOND LOCOMOTIVE & MACHINE WORKS,

SIX WHEEL LOCOMOTIVE WITH TENDER.



Having added to their extensive plant a large number of special tools, are prepared to build of the best and most approved designs, Light Locomotives, Passenger, Freight, Tramway, Noiseless Street Motors and Mine Engines. Also Pole Road Locomotives, the only successful device of the kind made. Engines, Stationary and Portable, 10 to 300 horse-power. Boilers, Standard and Special, 10 to 300 horse-power. Gas, Water, Creosoting and other Heavy Machinery. Correspondence invited. Catalogues, specifications, photographs and estimates furnished on application.

JOHN STEPHENSON COMPANY LIMITED NEW YORK.

TRAMWAY CARS OF EVERY DESCRIPTION.
LIGHT, ELEGANT, DURABLE.

STEEL RAILS

PENNSYLVANIA

Standard Sections
Light Sections
Street RailsFish Plates,
Frogs, SwitchesSTEPHEN W. BALDWIN
SALES AGENT

16 lbs. Full Size.

STEEL COMPANY

50 to 80 lbs. per yard
16 " 45 " " "
30 " 88 " " "
Bolts & Nuts,
and Crossings.NO. 2 WALL STREET
NEW YORK N.Y.

MONTAGUE & CO.

MANUFACTURERS OF

* FIRE BRICK, *

Standard Sewer Pipe

AND CULVERT PIPE.

Double Strength, with Improved Sockets.

CHATTANOOGA, TENN.

THE NEW IMPROVED HEAVY STEAM-POWER Quaker Brick Machine

AND

Spiral Pug Mill.

CAPACITY,
30,000 to 40,000

PERFECT BRICK PER DAY.

Works in all kinds of clay and is a great saving in labor and expense.

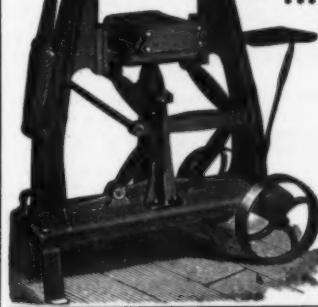
We contract to furnish complete Brick-Yard outfits—engines and everything needed, complete. Write for our handsomely illustrated catalogue containing valuable information to brick makers.

Estimates and plans furnished.
Correspondence solicited.

Address,
FLETCHER & THOMAS,
INDIANAPOLIS, IND.

Mention this paper.

THE PERFECTION BRICK PRESS,



An easy-working, quick-operating and powerful press. Will successfully press brick made on any Brick or Tile Machine.

The Wrought-Iron Tempering Wheel,

The most thorough mud temperer known. Temps faster, mixes better and runs lighter than any wheel made.

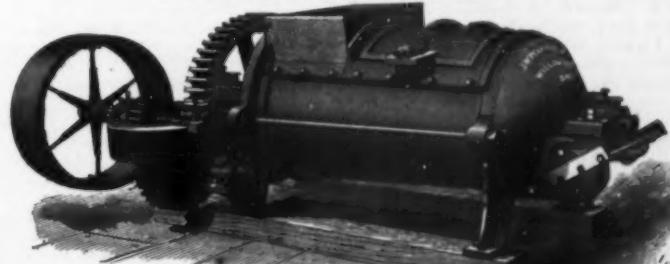
Barrows, Trucks, Molds, Kiln Doors, &c.

Write us for prices.

C. W. RAYMOND & CO.
DAYTON, O.

Mention Manufacturers' Record.

THE Very Latest and Best— Brick and Clay-Working Machinery, OUTFITS AND SUPPLIES.



Mention this paper and receive our elegantly illustrated Catalogues containing colored engravings of brick, tile, etc.

J. W. PENFIELD & SON, WILLOUGHBY, OHIO.

FREY'S NEW 40,000 BRICK PER DAY

From 1 to 20 inches
13 sizes CLAY CRUSHERS
Machines with or without Crushers. 6 different Brickmachines.
ADDRESS FREY, SHECKLER & HOOVER, BUCYRUS, OHIO.

Engines
and full
Factory
OUTFITS

GET • THE • BEST.

THE HERCULES WATER WHEELS

Are the Best Water Wheels ever made.

A Good Water Wheel Increases
The Value of Your
Whole Plant.

Get the Best at First, and Avoid
the Expense and Delay of
Changing the Wheels.

A Good Wheel will serve you
well for Twenty Years.

The Best is the Cheapest. It Does
More Work, Lasts Longer, and
Costs no more for Gears
and Setting than a
Common Wheel.

The Hercules Gives the Most Power
for its Size and the Highest
Average Percentage from
Full to One-half Gate
of any Wheel
ever made.



THE HERCULES WHEELS IN THE SOUTH.

| When ordered. | Name and Address. | Size of Wheel, Inches. | When ordered. | Name and Address. | Size of Wheel, Inches. |
|---|--|--|---|--|------------------------|
| 1879.. | Arctic Ice Co., Augusta, Ga..... | 1-36 | 1883.. | The Roberdel Mfg. Co., Rockingham, N. C..... | 1-39 |
| B. Merry, Berzelia, Ga..... | 1-22 | Hope Mills, Hope, N. C..... | 1-39 | | |
| J. B. Connely, Augusta, Ga..... | 1-39 | Porter Mfg. Co., Clarkesville, Ga..... | 1-30 | | |
| Summerville Mills, Augusta, Ga..... | 1-27 | Fairmount Mfg. Co., Williston, Ga..... | 1-45 | | |
| 1880.. | Pee Dee Mfg. Co., Rockingham, N. C..... | 1-39 | E. I. Du Pont, De Nemours & Co., Wilmington, Del..... | 1-12 | |
| Langley Mfg. Co., Langley, S. C..... | 1-25 | Geo. W. Brackenridge, San Antonio, Texas..... | 1-15 | | |
| Clifton Mfg. Co., Clifton, S. C..... | 1-54 | Young & Hack, Augusta, Ga..... | 1-45 | | |
| Piedmont Mfg. Co., Piedmont, S. C..... | 1-54 | Richmond & Alleghany R. R. Co., Richmond, Va..... | 1-12 | | |
| 1881.. | D. E. Converse, Glendale, S. C..... | 1-18 | San Antonio Water Works, San Antonio, Texas..... | 1-33 | |
| Eagle & Phoenix Mfg. Co., Columbus, Ga..... | 1-36 | James Riddle & Son, Wilmington, Del..... | 1-39 | | |
| Arctic Ice Co., Augusta, Ga..... | 1-30 | 1886.. | Roswell Mfg. Co., Roswell, Ga..... | 1-36 | |
| " " | " | " | Thomas M. Holt, Haw River, N. C..... | 1-60 | |
| " " | " | " | Reedy River Mfg. Co., Reedy River Factory, S. C..... | 1-36 | |
| Clifton Mfg. Co., Clifton, S. C..... | 1-54 | Jessup & Moore Paper Co., Wilm'n, Del..... | 1-42 | | |
| Dr. J. S. Boyd, Clay Hill, Ga..... | 1-15 | " " | 1-48 | | |
| Thomas M. Holt, Haw River, N. C..... | 1-48 | " " | 1-51 | | |
| Eagle & Phoenix Mfg. Co., Columbus, Ga..... | 1-18 | Marietta Paper Mfg. Co., Marietta, Ga..... | 1-12 | | |
| Princeton Mfg. Co., Athens, Ga..... | 1-39 | " " | 1-30 | | |
| 1882.. | D. E. Converse & Co., Glendale, S. C..... | 1-18 | Augusta Factory, Augusta, Ga..... | 1-42 | |
| H. A. Merry, Berzelia, Ga..... | 1-27 | Lockwood & Kampman, San Ant'o, Tex..... | 1-36 | | |
| E. Lockhart, Eubanks, Ga..... | 1-27 | " " | 1-18 | | |
| South Carolina R.R. Co., Charleston, S.C..... | 1-12 | 1887.. | Durham Water Works, Durham, N. C..... | 1-36 | |
| Rowell Mfg. Co., Roswell, Ga..... | 1-30 | Richmond Paper Mfg. Co., Richmond, Va..... | 1-36 | | |
| Richmond & Alleghany R. R. Co., Richmond, Va..... | 1-9 | Augusta Electric Light Co., Augusta, Ga..... | 1-36 | | |
| Riverside Cotton Mills, Danville, Va..... | 1-48 | Petersburg Electric Light Co., Petersburg, Va..... | 1-39 | | |
| Leak, Wall & McRae, Rockingham, N.C..... | 1-48 | J. N. Williamson, Gibsonville, N. C..... | 1-39 | | |
| 1883.. | Marietta Paper Mfg. Co., Marietta, Ga..... | 1-12 | Riverside Cotton Mills, Danville, Va..... | 1-42 | |
| " " | " | C. J. Milne & Son, Wilmington, Del..... | 1-42 | | |
| J. A. Harris, Holcomb's Rock, Va..... | 1-15 | Porter Mfg. Co., Clarkesville, Ga..... | 1-42 | | |
| D. E. Converse & Co., Glendale, S. C..... | 1-18 | | | | |
| The Roberdel Mfg. Co., Rockingham, N. C..... | 1-18 | | | | |
| Pacolet Mfg. Co., Pacolet, S. C..... | 1-54 | | | | |
| Eagle & Phoenix Mfg. Co., Columbus, Ga..... | 1-30 | | | | |
| J. C. Watson & Bro., Ridge Springs, S. C..... | 1-21 | | | | |

If you want to buy a new water wheel, if your old wheel does not give absolute satisfaction, if you would like to know just how perfect a water wheel can be made, or if you are in any way interested in water wheels, it will pay you to write for CATALOGUE NO. 3 to the

HOLYOKE MACHINE CO.
WORCESTER, MASS.

The Globe Incandescent Lamp.
A 400 Candle Power Coal Oil Burner which will brilliantly illuminate
a room 50 feet square.



For Lighting Storerooms,
Hotel Offices, Dining Rooms,
Halls, Churches, Restaurants,
Saloons, etc.

Wick 12 inches in circumference.

Reservoir holds 15 pints.

Costs less than 2 cents per hour to operate.

The wick is raised by a vertical movement without Ratchets or Rollers.

Produces a Soft, Steady, Golden Illumination at about one-third the cost of gas.

Affords the convenience of but one reservoir to fill and one globe to clean.

Specially adapted for lighting factories where a powerful STEADY light is required.

TWO GLOBE LAMPS will produce as much light as one arc electric lamp, and will illuminate a room with greater satisfaction, requiring no machinery.

MANUFACTURED BY

THE STANDARD LIGHTING CO. 110 to 120 Perkins Avenue,
CLEVELAND, O. U. S. A.

Eastern Agents:
H. & N. RUSSELL & DAY, 42 Barclay St., New York.

WANTED.—A good Agent in every Southern city to handle our Lamps and Vapor Stoves. Correspondence Solicited.

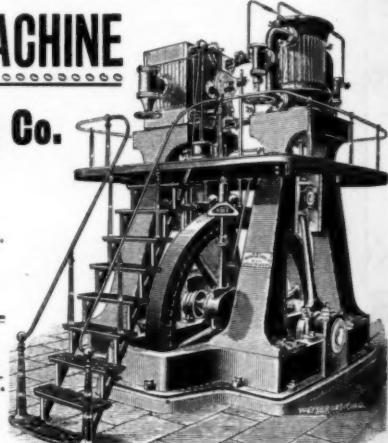
ARCTIC ICE MACHINE

Manufacturing Co.

CINCINNATI, OHIO.

OFFICE, 24 PIKES BUILDING.

P. O. Box 348.



OUR OWN SHOPS.
MACHINES CARRIED IN STOCK.
AND ORDERS
PROMPTLY EXECUTED.

The Improved Arctic with Corliss Engine.

SAWYER-MAN ELECTRIC CO.

Licensed by and Succeeding to the Commercial Business of the

CONSOLIDATED ELECTRIC LIGHT COMPANY.

OWNERS

OF THE

SAWYER-MAN

PATENTS



GENERAL OFFICES:
Mutual Life Building,
No. 22 Nassau St., N. Y. City.

BALTIMORE OFFICE:
No. 217 E. Fayette St.

PHILADELPHIA OFFICE:
No. 205 Walnut Place.

BOSTON OFFICE:
No. 33 Federal Street.

The DYNAMO of this Company is AUTOMATIC in its regulation, and will maintain a UNIFORM LIGHT, with ALL or ANY PORTION of the lights in Circuit. Our LAMP will not BLACKEN and will MAINTAIN its CANDLE POWER during its Guaranteed life. Plans and Estimates Furnished for all kinds of Incandescent Lamps. ESTIMATES FURNISHED FOR THE THOMSON-HOUSTON SYSTEM OF ARC LIGHTING.

Advertise in the MANUFACTURERS' RECORD.

ALABAMA'S GREAT MINERAL WEALTH

SURROUNDS THE

★ CITY OF TALLADEGA, ★

which, according to statistics, is the **MOST HEALTHFUL CITY IN ALABAMA**, and the County Seat of Talladega County.

THE CITY HAS A POPULATION OF 5,000, AND ITS POPULATION IS RAPIDLY INCREASING.

TALLADEGA is on the main line of the E. T. V. & G. Railroad, the A. & A. Railroad, and is the present terminus of the T. & C. Railroad. Work is rapidly progressing on the Birmingham & Savannah Air Line Road, between Birmingham and Savannah, and within twelve months this road will be completed via Talladega from Birmingham to Savannah, which will place Talladega on the direct line from Birmingham to deep water on the Atlantic, making

TALLADEGA ONE OF THE BEST DISTRIBUTING POINTS IN THE STATE.

THE CITY HAS

AN EXCELLENT SYSTEM OF COMMON GRADED SCHOOLS,

With a scholastic population of 500, and **THE MOST COMMODIOUS AND ATTRACTIVE PUBLIC SCHOOL BUILDING IN THE STATE**. The main building is a three-story brick, slate roof structure, well ventilated, heated by steam; has accommodations and seating capacity for 500 pupils. This school is owned and sustained by the city. All branches of English literature, foreign languages, music, the sciences and art, are taught for a nominal tuition. Among other educational institutions are the following:

SYNODICAL FEMALE INSTITUTE, Property valued at \$50,000.

D. D. & B. INSTITUTE, Property valued at \$150,000.

BLIND INSTITUTE, (in course of construction,) property valued at \$150,000.

FOSTER COLLEGE, property valued at \$150,000.

No other city in Alabama has so many educational institutions and so many public buildings.

← TALLADEGA HAS THE MOST COMPLETE SYSTEM OF WATER WORKS IN THE STATE. →

The stand pipe has a capacity of 175,000 gallons, and into this reservoir a supply of fresh, clear, pure water is pumped every day from a large spring located in the heart of the city, which discharges over 2,000,000 gallons per day. The gravity pressure from this system is 90 pounds to the square inch in the business portion of the city. The city has broad streets, well macadamized and shaded with beautiful trees, and is well lighted with a **SUPERIOR QUALITY OF GAS**. Sixty fire plugs and forty gas lamps protect against fire and illuminate the streets.

A **LARGE FURNACE PLANT** gives employment to thousands of hands, and makes a high grade of chilled car-wheel iron from ores, limestone and coal within ten minutes haul by rail, or an hour's haul by wagon. **FOUR LARGE LUMBER MILLS**, with an aggregate daily capacity of 200,000 feet of lumber, cut from the long-leaved yellow Pine of this country. **FOUR BRICK YARDS** are in active operation. A **SASH, DOOR** and **BLIND FACTORY**, a **FOUNDRY, MACHINE SHOP, FLOUR MILL, COTTON-SEED OIL MILL**, and various other industries are in successful operation, and the **TALLADEGA ICE CO.** cools the thrifty population with pure ice at 50 cents per hundred. Another large furnace plant will be completed within the next ten months. A Spoke and Handle Factory and many other industries are projected, with a view to early completion.

Taxable property has increased 100 per cent. within the past twelve months. The rate of taxation is limited in the city charter to half of one per cent., and the city offers an exemption from taxation to all manufacturing enterprises for a period of ten years. The county of Talladega supplies more crude material, in the way of minerals and timber, than any other county in the State. Almost within the corporate limits of the city are extensive deposits of the highest grades of limonite ores, yielding 50 to 58 per cent. metallic iron, with only a trace of phosphorus, and limestone abounds in the greatest abundance. Coal is within twenty miles by rail.

THE TALLADEGA LAND & IMPROVEMENT CO. owns 5,000 lots suitable for residences, business and manufacturing, in and adjacent to the city. Lots are donated to manufacturing enterprises, and liberal inducements offered to actual settlers. **SPRING LAKE PARK** is owned by this company, and it is being made the most attractive resort in the State. The lake covers an area of seven acres, and is a beautiful sheet of clear spring water. Parties seeking a healthy climate, free from malaria and epidemics, and a prosperous city, are invited to visit Talladega. Address for maps, etc.

The Talladega Land & Improvement Co.,



Talladega, Ala.

ATHENS, East Tennessee

THE COMING

→ Iron and Manufacturing City of the South. ←

Athens is the county seat of one of the most fertile counties in East Tennessee. The health of the city is unsurpassed, and is **ABSOLUTELY FREE FROM ALL MALARIAL OR EPIDEMIC DISEASES**. The surrounding scenery is very fine. From the main avenue the whole valley of East Tennessee can be seen, from the Cumberland Mountains on the west to the Great Smoky Mountains on the east; some of the tallest peaks east of the Rockies being in full view. **FINE MINERAL SPRINGS** are adjacent and are popular summer resorts. The society of Athens is excellent. A cordial welcome is extended to all law-abiding people locating in the town. The **EDUCATIONAL FACILITIES** are good. Beside public and preparatory schools, Athens is the seat of **THE GRANT MEMORIAL UNIVERSITY**, which has an enrollment of over 300, and whose graduates include some of the most distinguished citizens in the country. Among the industries and institutions of the place in active operation are:

THE ATHENS BUILDING & LOAN ASSOCIATION, \$250,000. **THE ATHENS WOOLEN MILLS, \$100,000.**

THE FIRST NATIONAL BANK, \$50,000.—To be increased at once.

FOUNDRY & MACHINE SHOPS, \$25,000.

FURNITURE WORKS, \$15,000.

FLOURING MILLS, \$20,000, etc.

500 men are now at work on the new railroad from Athens to the

RICHEST IRON FIELDS IN THE SOUTH

JUST EAST OF THE TOWN.

Only eight miles from Athens are **VEINS OF RED FOSSILIFEROUS ORE 11½ FEET THICK**, and 4 to 12 miles beyond are **THE LARGEST DEPOSITS OF BROWN ORES IN THE SOUTH**. The ores of both varieties, in addition to being inexhaustible, are both superior in quality to any ores of either variety at present mined in the South. An assertion that can be sustained. Coke can now be obtained at the lowest prices, and in addition a new railroad is now projected to the Cumberland Coal Fields, only 22 miles distant. These roads will give Athens **UNSURPASSED SHIPPING FACILITIES**. The road under construction will penetrate large deposits of Tennessee Variegated Marble; also an Unopened Timbered Region, and will develop the

Largest Colored Slate Deposits in the United States.

These quarries are now being opened, and are pronounced by experts Absolutely Inexhaustible, and equal in quality to the finest Vermont Colored Slate.

The ATHENS MINING & MANUFACTURING CO.

Have alone just contracted for the erection of over

\$500,000 IN NEW MANUFACTURING ENTERPRISES

At Athens, including a 100-ton Blast Furnace, cost \$200,000; Cotton Mills, cost \$150,000; Furniture Works, employing 200 men, cost \$100,000; Hotel, cost \$60,000; Water Works, Street Car Lines, &c. These improvements have been commenced which, added to other improvements projected, will add

\$1,000,000 OF NEW MANUFACTURING ENTERPRISES TO ATHENS.

The company desire to open correspondence with parties desiring to locate, and will extend liberal inducements in addition to gifts of sites in order to induce New Manufacturing Enterprises to locate in Athens. City property is doubling in value every few months, and at present low prices beyond question a very fine investment.

The Athens Mining & Manufacturing Company,

R. L. BRIGHT, President.

R. J. FISHER, Secy. and Genl. Manager.

DECATUR, ALA.

Offers outside investors better inducements to locate than any other

CITY IN THE SOUTH.

AS A CITY OF

Mammoth MANUFACTURING Enterprises,

She has few equals and no superiors in the South.

There have been located at Decatur in the last few months the following Industries :

THE DECATUR LAND, IMPROVEMENT & FURNACE COMPANY. Has 50,000 ACRES of Iron, Coal, Mineral and Timber LANDS.

United States Rolling Stock Company's Plant, from Urbana, Ohio, \$1,000,000.
 Louisville & Nashville Railway Construction Shops, \$300,000.
 Charcoal Company's plant, costing \$120,000.
 A seventy-ton Charcoal Iron Furnace, costing \$190,000.
 A one-hundred-ton Blast Iron Furnace, costing \$225,000.
 The Decatur Iron Bridge Construction Company; cost of plant, \$100,000.
 The American Oak Extract Company's plant, costing \$60,000.
 Ivens & Sons Steam Boiler and Engine Works, costing \$100,000.
 Morse Cotton Compress plant, costing \$60,000.
 Southern Horse Nail Company, \$100,000.
 Decatur Lumber Company, Saw and Planing Mills, costing \$50,000.
 Berthard & Co., Sash, Door and Blind Factory, cost \$15,000.
 The Decatur Street Railway Company.
 The Plumbers' Supply Co., \$25,000.
 The Telephone Company.
 The Alabama Lumber & Fruit Package Co.
 Brush Electric Light Company, cost \$10,000.
 The Ironton Wheelbarrow Company, cost \$25,000.
 The St. Louis Investment Company, \$200,000.
 Howland & Co's Water Works System, costing \$200,000.
 Bleymeyer Artificial Ice Company, cost \$10,000.
 Four Mammoth Brickyards.

Jones, Poley & Co's Lumber Yards.
 The Hoosier Mills & Building Company.
 The Gate City Sash & Door Company.
 Decatur Car Wheel & Construction Company, \$60,000.
 Arantz Bro's Mills and Lumber Yards.
 Grant & Co's Furniture Factory.
 Decatur Carriage Company.
 Southern Lumber Company.
 H. S. Freeman's Mills and Lumber Yards.
 The Alabama Farmer's Friend Fence Machine Company.
 The Decatur Artificial Stone Company.
 Decatur Chain and Architectural Iron Works, capital \$100,000.
 Natural Gas Company, capital \$200,000.
 First National Bank, capital \$100,000.
 The Exchange Bank of Decatur, capital \$100,000.
 Merchants' Insurance Company, capital \$100,000.
 Decatur Building Association, capital \$300,000.
 Decatur Building Company, capital \$1,000,000.
 Buchheit's Bottling Works.
 Decatur Printing Company.
 Two daily papers, three weekly papers.
 Two hotels—one \$100,000, completed, and one \$300,000 being built; the largest in the South.
 Grand Opera House, \$100,000.

* THERE ARE OTHER *

Mammoth Enterprises

Locating here, and contracts are being made with some of the most extensive industries in the United States.

Decatur is the Healthiest city in Alabama, the death rate among whites for 1886 being only 11 in 1,000.

Decatur Land, Improvement & Furnace Company.

E. C. GORDON, President. H. G. BOND, Vice-Prest. and Gen. Manager. W. T. MULLIGAN, Secretary.

This Company has been pre-eminently successful in promoting the interests of the city of Decatur.

CORRESPONDENCE SOLICITED WITH PARTIES SEEKING LOCATIONS.

GADSDEN, ALA.

"The Hub of the Mineral Belt."

—ONLY—

IRON AND COAL

City in Alabama with River Transportation.

THE GADSDEN LAND AND IMPROVEMENT CO.

Own large tract of Eligibly Located Residence Property in the Most Desirable Part of the City, and have fine location on river and railroad for

MANUFACTURING ESTABLISHMENTS,

And are offering great inducements to manufacturers to locate their plants in this FAVORED LOCALITY. No place in the South has such Wonderful Advantages. Situated in the midst of the RICHEST IRON SECTION in the State, at the foot of Lookout Mountain on the banks of a Navigable River (THE BEAUTIFUL COOSA), surrounded by Forests of the Finest Timber on the Continent, with Fine Building and Fire Clay, and the FINEST BUILDING STONE all around us, with

Uninterrupted Health, and the Purest and Best Water, and Finest Drainage of any City in the State.

Gadsden should become the

→ GREATEST MANUFACTURING CENTER OF ALABAMA. ←

The Alabama Great Southern, Rome & Decatur, Tennessee & Coosa, Anniston & Cincinnati Railroads, with the ever flowing Coosa, navigable the year round, gives us as **FINE TRANSPORTATION FACILITIES** as any other city enjoys.

We now have Railroad Car Works, Furnaces, Foundry and Machine Works, Saw Mills, Sash, Door and Blind Factory, Furniture Factory, Ice Factory, Paint Mills Grist and Flouring Mills, Cotton Ginnery, Fine System of Water Works, Electric Lights, Telephone Communication over City, and also to neighboring cities, Atlanta and Rome, Ga.

WE WANT Rolling Mills, Bridge and Bolt Works, Cotton Factories, Woolen Mills, Furniture Factories, in fact all kinds of Factories, even Coffin Factories, (but we want to ship the Coffins to some of the other booming cities).

Liberal Grants of Land will be made by THE GADSDEN LAND & IMPROVEMENT CO., to any of the above-named industries.

FOR FURTHER PARTICULARS ADDRESS

M. L. FOSTER, Sec. & Treas.

THE GADSDEN LAND & IMPROVEMENT CO.

Post-Office Box 145.

GADSDEN, ALABAMA.

TRADE NOTES.

A ROLLER mill and woolen factory are both wanted at Morgan, Bosque Co., Texas. Will make donations of cash and grounds, or take stock. See advertisement in this issue as to particulars.

THE Cleveland Twist Drill Co., of Cleveland, Ohio, though unusually crowded with work, have had to shut down for a week to repair a boiler. They will, however, soon be running again and will be able to deliver promptly, and ask the indulgence of patrons.

THE Hill Clutch Works, of Cleveland, O., have been awarded the highest honor for friction clutches by the American Institute Fair Association of New York—a very handsome bronze medal, for which there were a number of competitors. This concern makes a specialty of furnishing the equipment for electric light plants, and builds all kinds of power transmission machinery.

H. A. WHITE, agent Decker & Bonitz Card Clothing Co., Leicester, Mass., writes us "that the business of A. White & Son, which we have merged with that of Decker & Bonitz Card Clothing Co., was started in 1819 by Col. Jos. B. Sargent in Leicester, Mass., and was sold by him to Alonso White, then a young man, in 1836, who, first with J. Q. Lamb as Lamb & White, and then next as White & Denny, and since 1868 as A. White & Son, conducted a successful business. For some years since the son, H. A. White, has had the entire charge of the business, and it has largely increased under his management,

THE Walker Manufacturing Co., of Cleveland, Ohio, are engineers and founders of superiority. The contract for machinery for the 12th Street Cable Railroad, Kansas City, Mo., fully demonstrated the fitness of this concern to undertake large orders, and execute with wonderful skill contracts of great magnitude. The contract consisted of 20 car-loads of machinery of the most approved pattern, among which were two engines of 1,000 aggregate horse-power; two 500 horse-power friction clutches, 14-inch bore, weight 31,578 pounds; one main line in shaft, 14 and 15 inches diameter, weight 24,074 pounds, and such gears as were necessary, weighing 17,338 pounds—making a grand total of 72,990 pounds. The whole mechanism was supported by a system of rigidly constructed cast iron girders securely bolted together, forming a complete frame work, and all mounted on massive foundations. Each cable was so arranged that it might be readily disconnected by means of friction coupling without detriment to the operation of the other cable. The drums on which the cable runs are each of such construction as will prevent wear, as in ordinary drums, and the consequent breaking of cables through undue strain. Parties in want of similar machinery will do well to secure estimates from the above-named concern before purchasing, as they are fully prepared to fill all such contracts, as well as to furnish shafting, hangers and all kinds of gears.

Pumps and Other Hydraulic Machinery.

The largest manufactory of pumps, fire engines, hydraulic rams, hydraulic machinery, etc., in the world is claimed to be that of Rumsey & Co., of Seneca Falls, N. Y.

well pumps, force pumps, power piston pumps, pumps for mines, and hand force pumps for gardens, houses and other uses; ship pumps, railroad force pumps, and all kinds of gearing for pumping machinery, air pumps, hydraulic pressure testing pumps, rotary force pumps for hand and power, hydraulic rams, iron sinks with improved sewer traps, steel fire-alarm, plantation and farm bells, corn shellers and separators, garden and fire engines, garden syringes and hand fire extinguishers, fire engines, hose carts, hook-and-ladder trucks, etc.

They issue very handsome catalogues, giving the capacity per stroke of each size of their different pumps. This feature commends itself to mechanics as saving much reference to tables or tiresome computation, and gives exactly the quantity of water raised by each pump per minute. Their reputation for precision and promptness in the execution of orders is noted, and their experience in personal supervision of their business is a sufficient guarantee for the continued confidence of their customers and the trade generally.

For catalogues, discount sheets and prices, address Rumsey & Co., Seneca Falls, N. Y., U. S. A.

FIGURES TALK! Over 150,000 people stopped at the Grand Union Hotel, New York, during the last year. The secret of this hotel's success is an open secret. The management take care of their patrons and try and give them the value of their money. †

TRAVELERS bound for Boston will do well to stop at the favorite American House in that city, where all the comforts of a quiet first-class hotel and all the luxuries of the season at table may be enjoyed at popular prices. †

SENECA FALLS PUMP & FIRE APPARATUS WORKS



RUMSEY & CO. (LIMITED) PROPRIETORS, SENECA FALLS, N.Y. U.S.A.

and now enters upon the new arrangement with larger facilities and increased prospect of success. Some of our largest customers have been with us for over fifty years, which facts speak volumes for fair dealing and mutual satisfaction."

THE Loom Picker Co., Biddeford, Me., manufacture loom harness and raw-hide and leather loom pickers. They find business good, and report, among others, recent shipments of loom harness to Eagle and Phoenix Manufacturing Co. and Muscogee Manufacturing Co., Columbus, Ga.; Lane Mills, New Orleans; Algernon Mills, Augusta, Ga.; Reedy River Manufacturing Co., Reedy River Factory, S. C.; and recent shipments of loom pickers to Eagle and Phoenix Manufacturing Co. and Muscogee Manufacturing Co., Columbus, Ga.; Tennessee Manufacturing Co., Nashville, Tenn.; Nashville Woolen Mill Co., Nashville, Tenn.; Reedy River Manufacturing Co., Reedy River Factory, S. C., &c.

THE Carlyle Brick Co., Bridgeport, Ohio, after an investigation of various methods of making ornamental brick and a trial of 4 or 5 varieties of presses for that purpose, adopted the Perfection and placed their order with the manufacturers, Messrs. C. W. Raymond & Co., Dayton, Ohio, for a No. 2, a "special No. 3" and a full line of dies for ornamentals, embracing those for land courses 5x9, 7x7, and panels 10x10, 12½x12½. The "special No. 3" being particularly adapted to their heavy work, is now in course of construction, and will be completed about April 1. They will have one of the most complete outfits in the West.

They make over 800 different styles and sizes of pumps, both in brass and iron; also garden and fire engines, hydraulic rams, corn shellers, jacks screws, adapted to cider and cotton presses and locomotive lifting, etc. They keep on hand at their various warehouses full and complete stocks and interchangeable parts of their manufactures, and are ready at all times to fill orders promptly and carefully.

For 45 years they have been producing these lines of goods. They have extensive facilities, fine water-power, all the improved appliances of machinery and skilled assistants. Their local situation and New York city connections are such that shipments to any point in the world can be made with dispatch and economy.

All parts of their pumps are perfectly made, and, being interchangeable, are easily mounted without filing. They received the highest awards for pumps and fire engines at the International Exhibition at Philadelphia, the Australian Exhibition of 1880, the American Institute Fairs and others. Their pumps are known everywhere throughout the world, and their reputation is attested by the constantly increasing demand for them. All their manufactures are warranted in every particular, and in case the goods do not give satisfaction after a fair trial they take them back and refund the money.

Among the goods which they are now manufacturing in large quantities are iron cistern pumps, new style revolving fulcrum cistern pumps, with close and open tops and pitcher spouts; materials for driven wells,

Important.

When visiting New York city, save baggage express and carriage hire, and stop at the Grand Union Hotel, opposite Grand Central Depot.

600 handsomely furnished rooms at \$1 and upwards per day. European plan. Elevators and all modern conveniences.

Restaurants supplied with the best. Horse cars, stages and elevated railroads to all depots. You can live better for less money at the Grand Union Hotel than any other first-class hotel in the city. †

THE BEST.—First-class accommodations at Palace Hotel, Cincinnati, \$2 and \$2.50 per day. Elegant rooms, fine table and all conveniences. †

If you have occasion to visit Lowell, Mass., and want comfort and attention in the most convenient locality of the city, try the St. Charles. †

WESTPHAL'S IMPROVED REVOLVING SCREW, BOLT AND SHOT CASES.
ADJUSTABLE FIRE BACKS AND LININGS FOR COOK STOVES.
IRON STORM THRESHOLDS.
SEND FOR ILLUSTRATED CIRCULARS.
SCHENCK'S ADJUSTABLE FIRE BACK CO.
94 MARKET STREET. CHICAGO.

BOOKS Relating to Mechanical, Mining and Electrical Engineering. Descriptive Catalogue and information about any book sent promptly on application.

E. & F. N. SPON.
35 Murray Street, NEW YORK.

JOHN WILEY & SONS, 15 ASTOR PL., New York.
Publishers of

Scientific and Industrial Works.

Send for Catalogues and Circulars—Free by mail.

FOR THE BEST
BOILER COMPOUND,

ADDRESS
THE INTERNATIONAL MFG. CO.
280 Pearl St., CLEVELAND, OHIO.



Pennsylvania Agricultural Works, York, Pa. Farquhar's Standard Engines and Saw Mills. Send for Catalogue. Portable, Stationary, Traction and Automatic Engines & Specialty. Warranties equal to any made.

For the Latest Improved
FAST FEEDING

Planing Mill Machinery,

ADDRESS THE
Preble Machine Works Co.,
CHICAGO, ILL.

DON'T BUY AN ENGINE OR BOILER

Until you have seen our circulars. Engines complete from 5 to 110 horse power, both Vertical and Horizontal, at prices below those of other reputable makers. 1400 in use. Boilers of every style. Automatic Engines for Electric Lights. Centrifugal Pumping Machinery for Drainage or Irrigation. Established 22 years. Perfect satisfaction guaranteed. Ask for Circular M and address

Morris Machine Works,
BALDWINSVILLE, N. Y.

STEAM PUMPS
FOR EVERY DUTY.

Best materials only used. Fully guaranteed and tested. It will pay you to write for prices. HUGHES STEAM PUMP CO., CLEVELAND, OHIO. Donegan & Swift, New York Agts.



PERFORATED METAL FOR COTTON SEED OIL MILLS, RICE MILLS, MINING SCREENS &c. THE ROBERT AITCHISON PERFORATED METAL CO. 16 Van Buren St. Chicago, Ill.



Stilwell's Patent HEATER AND FILTER Combined.

Lime
Extracting

The Only Lime Extracting Heater That Will Prevent Scale in Steam Boilers.

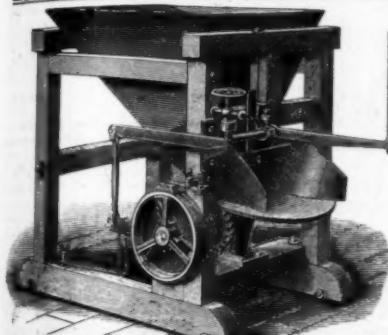
Removing all impurities from the water before it enters the boiler.

Thoroughly Tested.

Over 3,000 of Them in Daily Use.

This cut is a facsimile of the appearance of a No. 5 Heater at work on ordinary lime water, when the door was removed after the Heater had been running two weeks. Illustrated Catalogue Free.

STILWELL & BIERCE MFG. CO., DAYTON, O.



Mecklenburg Iron Works,
+ CHARLOTTE, N. C. +

MANUFACTURERS OF

Saw Mills, Cotton Presses, Engines, Boilers, Water Wheels,

★ Mining Machinery, ★
CORNISH PUMPS, CRUSHERS, AND STAMP BATTERIES.

Southern Agents of
Challenge Ore Feeders, Lidgerwood Hoists, Embrey Tables.



Established 1874.

MANUFACTURERS OF
Taper Shank Drills,
Straight Shank Drills,
Blacksmith Drills,
Bitstock Drills,
Straight Fluted Drills,
Machine Bit Drills.

Cleveland Twist Drill Co.



Send for Catalogue.

OFFICES—24 and 26 WEST ST., Cleveland, O.

Write for Discounts.

MANUFACTURERS OF
Self feeding Reamers,
Expanding Reamers,
Shell Reamers,
Stay-bolt Taps,
Taper Reamers.

New Process Twist Drill Co., Taunton, Mass., MANUFACTURERS OF Hot Forged Twist Drills
Of every description. Warranted to stand more than those made by any other process.



Walsh, Hoen & VonKappf, Agents 31 S. Charles Street, Baltimore, Md.

SYRACUSE TWIST DRILL CO., Syracuse, N. Y., U. S. A.

Manufacturers of **TWIST DRILL BITS**

For WOOD and METAL.
Measuring Machines, Comparators, Reamers, Drill
Chucks, Tool Holders
and Special Tools.
Send for Illustrated Catalogue
and Prices.



The STANDARD TOOL CO.

—Cleveland, Ohio.—

MANUFACTURERS OF
INCREASE TWIST DRILLS, Etc.,
TAPER SHANK DRILLS,
Straight Shank Drills,
MACHINE BIT DRILLS,
Bit Stock Drills,

SOCKETS,



A. S. CORBLY.

THOMAS V. HALL, Mechanical Engineer.

THOMAS V. HALL & CO.
Manufacturers' Agents for the Sale of Complete Outfits in Machinery

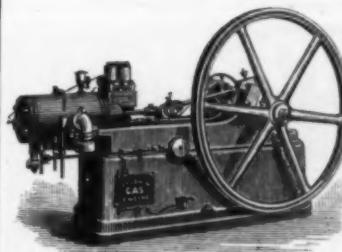
At Manufacturers' Prices, to Fully Equip the Following Plants:

Canning Factories, Spoke, Hub and Handle Factories, Furniture Factories,
Cotton Mills, Incline Plane and Cable Railroads, Saw and Shingle Mills,
Brick and Tile Works, Flouring and Feed Mills, Coal Mine Plants,
Granite and Coal Elevators, Soap and Candle Works, Water Works Plants.
Hand, Steam and Hydraulic Passenger and Freight Elevators, Dumb Waiters, Also, Steam-Heating
Apparatus, Arc and Incandescent Electric Light Plants and Electric Motors.

Construction Drawings furnished with all outfits free of charge. Personal superintendence at reasonable
rates when desired. Correspondence solicited. Send for prices. Address all communications to
THOMAS V. HALL & CO., Mechanical and Constructing Engineers.

Office: Bates Block, West Ninth St., CHATTANOOGA, TENN.

The Baldwin Gas Engine



The Simplest, most Efficient and Steadiest running
Gas Engine
Ever Built.

Adapted for Electric Lighting
AND ALL INDUSTRIAL PURPOSES.

OTIS BROTHERS & CO.

Elevators and Hoisting Machinery,

New York. Boston. Philadelphia. Pittsburgh.

Steam
Engines,
Shafting,
Hangers,
Pulleys, etc

CANNING MACHINERY,

The Warfield Manufacturing Co.

336, 338, 340, 342 NORTH ST. - - BALTIMORE, MD

Warfield's
Green Corn
Cutter.

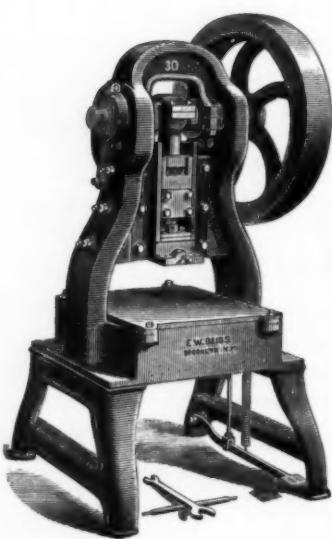
E. W. BLISS CO.

Plymouth, Pearl, John and Adams Sts.

OFFICE: 17 Adams Street.

BROOKLYN, N. Y.

Presses,
DIES
AND
Special Machinery,
FOR
Sheet Metal Workers.



Cam Toggle and Drawing Presses, Power Presses, Foot Presses, Automatic Drop Presses for Forging and Stamping, Double Seaming Machines for round, square and oval work, Circular Shears, hand and power; Squaring Shears, foot and power; Canning Machinery, Dies of every description, Tools for working Sheet Metals, Petroleum Can Machinery, Special Machinery. Adjustable Machines for Cutting all sizes of Oval Blanks—the only machines in the market that will cut a true oval

Send for Circulars.



G. A. CROSBY
Manufacturers of
PRESSES, DIES
SPECIAL MACHINERY
SHEET METAL WORKERS
259, 261 & 263 Randolph St., Chicago, Ill.

PRESSES, DIES AND OTHER
SHEET-METAL TOOLS
FERRACUTE MACHINE CO.
BRIDGEPORT, N. J., U. S. A.
FRUIT CAN MACHINERY.



THE GENUINE
INGOTS & MANUFACTURES
BEAR OUR
REG. TRADE MARKS
PHOSPHOR-BRONZE
INGOTS, CASTINGS & MANUFACTURES.
THE PHOSPHOR BRONZE SMELTING CO. LIMITED
512 ARCH ST. PHILADELPHIA PA. U. S. A.
ORIGINAL MANUFACTURERS OF PHOSPHOR-BRONZE IN THE UNITED STATES AND OWNERS OF THE U. S. PATENTS.



NIAGARA
Stamping & Tool Co.

MANUFACTURERS OF

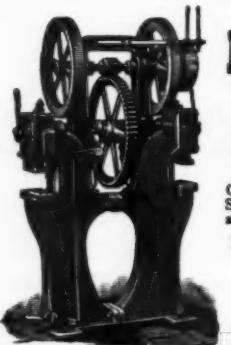
Tinners' Machines and Tools

For Working Sheet Metal, &c.

Squaring and Circle Shears,
Fruit Can Dies and Tools,
Canners' Outfits.

Superior, Corner of Randall Street,
BUFFALO, N. Y.

Write for our Catalogue and Price List and mention this paper.



THE
LONG & ALLSTATTER
COMPANY,
HAMILTON, OHIO.

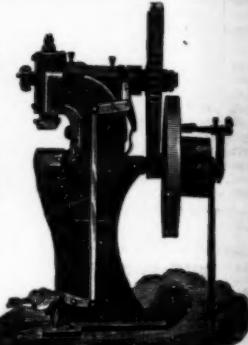
Double, Single, Angle-Bar,
Gang, Horizontal, Twin, Boiler,
Spacing, Gate, Multiple, BELT
and STEAM-DRIVEN

PUNCHES and SHEARS,
Over 300 Sizes.

ALSO

Power Cushioned
HAMMER

Send for New Catalogue.



Colt's New Lightning
22 CALIBRE

Rim Fire Magazine Rifle.



THE MOST PERFECT LITTLE GUN OF THE AGE

For Small Game, Gallery, Target Practice and Snap shooting it is unrivaled. It is light, durable and safe. Weight 54 pounds. The ammunition is cheap—100 shots for 50 cents. For circulars giving full description and price, also for "IDEAL RELOADING TOOLS," address

IDEAL MANUFACTURING CO.

P. O. Box 1064, C.

NEW HAVEN, CONN.

CABINET CLOTHES DRYER.



A NEW DEPARTURE. The Old Clothes Horse Must Go.

Sells everywhere on sight. Agents make big money selling it. Liberal terms and prices to good active Agents.

Write for particulars to

F. F. ADAMS CO., Erie, Pa.

→ HARDWARE. ←

Baltimore WHOLESALE Prices.

| ANVILS. | | | |
|---|--|---|---|
| Stag and Vulcan | 10 lb. to 20 c. dis 50¢ | | |
| Wright's | 25¢ | | |
| Armstrong's Mousie Hole | 30¢ | | |
| Trotter | 35¢ | | |
| Wilkinson's | 40¢ | | |
| ADJUGERS AND BITS. | | | |
| Cane Valley Mfg. Co. | extra, 50¢ to 5 | | |
| Douglas Mfg. Co. | 50¢ to 5 | | |
| Ives | 50¢ | | |
| Cook's Douglass Mfg. Co. | dis 50¢ to 5 | | |
| Grindell | dis 50¢ to 5 | | |
| Front Solid Head | dis 50¢ to 5 | | |
| Small Jennings' Anger, Dowell, Machine | dis 50¢ to 5 | | |
| Dowell and Hand Rail Bits | dis 50¢ to 5 | | |
| Low "Jennings" Bits | dis 50¢ to 5 | | |
| Expansive Bits, Clark's small, first; large, | dis 50¢ to 5 | | |
| Expansive Bits, Ives | dis 50¢ to 5 | | |
| Expansive Bits, Ives | dis 50¢ to 5 | | |
| Expansive Bits, Ives | dis 50¢ to 5 | | |
| Hollow Angers, Ives | dis 50¢ to 5 | | |
| Hollow Angers, Douglass | dis 50¢ to 5 | | |
| Hal. Ang., Rooney's Adjust. | dis 50¢ to 5 | | |
| Hal. Ang., Stearns' Adjust. | dis 50¢ to 5 | | |
| Hal. Ang., Ives' Expansive | each 50¢ to 5 | | |
| Hal. Ang., Universal Expansive | each 50¢ to 5 | | |
| Wood's | dis 50¢ to 5 | | |
| Giant Bits | 50¢ to 50¢ gross, dis 50¢ | | |
| Giant Bits, Diamond | 50¢ to 50¢ gross, dis 50¢ | | |
| Double Cut Gimlet Bits, Shephardson's | dis 50¢ to 5 | | |
| Double Cut Gimlet Bits, Douglass' | dis 50¢ to 5 | | |
| Double Cut Gimlet Bits, Ives | dis 50¢ to 5 | | |
| Mow's Bit Stock Drill | dis 50¢ to 5 | | |
| Hammel's Ship Augers | dis 50¢ to 5 | | |
| AWL HAPTS. | | | |
| Sewing Brass Ferrule | 30 to 50 gross—dis 40¢ to 5 | | |
| Sewing, Short | 30¢ to 50 gross—dis 40¢ to 5 | | |
| Sewing, Long | 30¢ to 50 gross—dis 40¢ to 5 | | |
| Sewing Peg, Plain Top | 30¢ to 50 gross—dis 40¢ to 5 | | |
| Sewing Peg, Leather Top | 30¢ to 50 gross—dis 40¢ to 5 | | |
| AWLS, READ HAPTS, &c. | | | |
| Avis, Sewing, Common | 25¢ to 35¢ | | |
| Avis, Shouldered Peg | 30¢ to 45¢ | | |
| Avis, Patent Peg | 35¢ | | |
| Avis, Shouldered Brad | 30¢ to 50 gross—dis 40¢ to 5 | | |
| Avis, Headed Brad | 30¢ to 50 gross—dis 40¢ to 5 | | |
| Brad Sets, Aikens' | 30¢ to 50 gross—dis 40¢ to 5 | | |
| Brad Sets, No. 45, \$1.50; No. 43, \$1.50, dis 50¢ to 5 | | | |
| Brad Sets, Stanley's Exc. | No. 1, 50¢ to 50¢, dis 50¢ to 5 | | |
| Brad Sets, Stanley's Exc. | No. 2, 50¢ to 50¢, dis 50¢ to 5 | | |
| Brad Sets, Stanley's Exc. | No. 3, 50¢ to 50¢, dis 50¢ to 5 | | |
| AXLES. | | | |
| Collins & Co. | 50¢ to 50¢; bevelled, 50¢ to 50¢ | | |
| Lippincott or Mazz's | 50¢ to 50¢ | | |
| Stag's Bit, 4 to 5 and under | 50¢ to 50¢ | | |
| Stag's Bit, 5 to 6 and over | 50¢ to 50¢ | | |
| Stag's Bit, bevelled | 50¢ to 50¢ | | |
| Double Bit, 4 to 5 and under | 50¢ to 50¢ | | |
| Double Bit, 5 to 6 and over | 50¢ to 50¢ | | |
| Double Bit, bevelled | 50¢ to 50¢ | | |
| Second quality Axles | 75¢ less than above | | |
| AXLES. | | | |
| Shaw's & Co., Iron | 50¢ to 50¢ | | |
| " " steel | 50¢ to 50¢ | | |
| ALL GEARS—FRAMES | 50¢ to 50¢ | | |
| BALANCES. | | | |
| Spring Balances | dis 50¢ | | |
| BELLS. | | | |
| Lead, Light Brass | dis 50¢ | | |
| Lead, White Metal | dis 50¢ | | |
| Lead, Silver Tinne | dis 50¢ | | |
| Lead, Globe (Cone's Patent) | dis 50¢ | | |
| Gong, Abbe's | dis 50¢ | | |
| Gong, Yankee | dis 50¢ | | |
| Gong, Barton's | dis 50¢ | | |
| Lead Reading | dis 50¢ | | |
| Fell, Brock's | dis 50¢ | | |
| Cook, Taylor's | dis 50¢ | | |
| Lever, Sergeant's | dis 50¢ | | |
| Brass | dis 50¢ | | |
| Lever, R. & E. M. Co's | dis 50¢ | | |
| Call | dis 50¢ | | |
| Over, Common Wrought | dis 50¢ | | |
| Over, Western, Sergeant's List | dis 50¢ | | |
| Over, Kentucky, Sergeant's List | dis 50¢ | | |
| Over, Moore's or Dodge's, Genuine Ky., new list: | dis 50¢ | | |
| Over, 1 1/2 to 3 1/2, 5 6 Hogs | dis 50¢ | | |
| Over, 50¢ to 50¢ to 50¢ to 50¢ to 50¢ | dis 50¢ | | |
| Over, Texas Star | dis 50¢ | | |
| BELLows. | | | |
| Hachsmith's Common | dis 50¢ | | |
| Miller's | dis 50¢ | | |
| Lead Bellows | dis 50¢ | | |
| BLIND FASTENERS. | | | |
| Fraser | dis 50¢ | | |
| Macmillan's | 50¢ to 50¢ per dozen | | |
| Van Sandt's Screw Pattern | 50¢ to 50¢ gross, not, dis 50¢ | | |
| Van Sandt's Old Pattern | 50¢ to 50¢ gross, not, dis 50¢ | | |
| Morin's | 50¢ to 50¢ | | |
| Zimmerman's, 10¢ to 15¢ | 50¢ to 50¢ | | |
| Zimmerman's, 9 in. | 50¢ to 50¢ | | |
| BLIND STAPLES. | | | |
| Keated, 1/4 in. and larger | 50¢ to 50¢ not | | |
| Keated, 1/4 in. | 50¢ to 50¢ | | |
| BLOCKS. | | | |
| Padfoot Blocks | dis 50¢ | | |
| Engall & Loud | dis 50¢ | | |
| BOLTS. | | | |
| Cat Iron Barrel Shutter, &c. | dis 50¢ | | |
| Cat Iron Chain (Sargent's list) | dis 50¢ to 50¢ | | |
| Wrought Barrels | dis 50¢ to 50¢ | | |
| Wrought Square | dis 50¢ to 50¢ | | |
| W. Shutter, all Iron, Stanley's list | dis 50¢ to 50¢ | | |
| W. Shutter, Brass Knob, Stanley's list | dis 50¢ to 50¢ | | |
| W. Shutter, Sargent's list | dis 50¢ to 50¢ | | |
| W. Sunk Flush, Sargent's | dis 50¢ to 50¢ | | |
| W. Sunk Flush, Stanley's | dis 50¢ to 50¢ | | |
| W. E. K. Flush, Stanley's | dis 50¢ to 50¢ | | |
| Carriage and Tire, Common, new list | dis 50¢ to 50¢ | | |
| Carriage and Tire, Philadelphia Pattern | dis 50¢ to 50¢ | | |
| Carriage Bolts, Clark's | dis 50¢ to 50¢ | | |
| Norway | dis 50¢ to 50¢ | | |
| E. B. & W. Carriage (old list) | dis 50¢ to 50¢ | | |
| The American Screw Co's, Phila | dis 50¢ to 50¢ | | |
| The "Bay State" | dis 50¢ to 50¢ | | |
| High Philadelphia Tire Bolt | dis 50¢ to 50¢ | | |
| Steel | dis 50¢ to 50¢ | | |
| Flax | dis 50¢ to 50¢ | | |
| Machinery | dis 50¢ to 50¢ | | |
| W. Eads and Lag Screws | dis 50¢ to 50¢ | | |
| BRAKES. | | | |
| SCARAB. | 50¢ to 50¢ | | |
| BRACKS. | dis 50¢ | | |
| 3. J. Bachman | dis 50¢ | | |
| Miller's | dis 50¢ | | |
| Spencer's Patent | dis 50¢ | | |
| W. F. Patent Brakes | dis 50¢ | | |
| Cannon Ball (American) | 45¢ to 50¢ | | |
| Unison's | dis 50¢ | | |
| BROOKING MACHINERY—WITHOUT ADJUGERS. | | | |
| West & Clark upright, 2 to 50 angular | 50¢ to 50¢ | | |
| West & Clark | 50¢ to 50¢ | | |
| West & Clark | 50¢ to 50¢ | | |
| West & Clark | 50¢ to 50¢ | | |
| West & Clark | 50¢ to 50¢ | | |
| CARRIERS. | | | |
| THE CARRIER AND FRICTION BARN DOOR HANGER CO. | MANFG BY CRONK HANGER CO. ELMIRA, N.Y. | | |
| No. 4—5-foot run, \$15.00 per dozen pair. | | | |
| 5-10 " | \$15.00 | " | " |
| 6-15 " | \$21.00 | " | " |
| Steel Track in 4, 6 and 8-foot Lengths, 10 cents per foot. | | | |
| THE QUINCY Metal Wheels | | | |
| FOR ALL PURPOSES. | | | |
| Conceded the best, and used by the leading manufacturers in the United States. The only Wheel in which the spokes are connected to other parts of the Wheel with enlarged tenons, formed in place by heavy pressure and while cold. See for descriptive catalogue, and mention this paper. | | | |
| Quincy Metal Wheel Co. | QUINCY, ILL. | | |
| Rim | dis 50¢ | | |
| Central Fire, pistol case | dis 50¢ | | |
| " " Military | dis 50¢ | | |
| B. B. Caps, Round Ball | 1.00 | | |
| " " Swaged Conical | 2.00 | | |
| Rim-fire, so short | 50¢ long | | |
| " 20 " | 10 " | | |
| " 25 " | 12 " | | |
| " 30 " | 15 " | | |
| Central Fire—30, \$11.00; 38, \$13.50; 41, \$15.00; 44, \$17.00 | | | |
| Horse and Curry | dis 10¢ | | |
| Cotton, new list, Aug. 1869. | dis 10¢ | | |
| Wool, new list, Aug. 1869. | dis 10¢ | | |
| Cast Steel, Polished | dis 50¢ to 50¢ | | |
| Cast Iron, Steel Points | dis 50¢ to 50¢ | | |
| Bullard's | dis 50¢ | | |
| Lead | dis 50¢ | | |
| Plate and Shallow Socket | dis 50¢ | | |
| Deep Socket | dis 50¢ | | |
| Martin's Patent (Phoenis) | dis 50¢ | | |
| Humason, Beckley & Co's | dis 75¢ | | |
| Sargent's | dis 75¢ | | |
| P. S. & W. | dis 75¢ | | |
| Jerman Halter and coll Chain | dis 50¢ | | |
| Trace, Breast and Fancy | dis 50¢ to 50¢ | | |
| Onida Halter Chain (old list) | dis 50¢ | | |
| Galvanized Pump Chain | dis 50¢ to 50¢ | | |
| Jack Chain, Iron | dis 50¢ to 50¢ | | |
| Jack Chain, Brass | dis 75¢ | | |
| White | dis 50¢ | | |
| Red | dis 50¢ | | |
| Blue | dis 50¢ | | |
| White Cravons | dis 50¢ | | |
| Cotton Fish Lines | dis 40¢ | | |
| Cotton Chalk Lines, so feet: | | | |
| No. 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, | | | |

| COMPASSES, DIVIDERS, &c. | |
|--------------------------|----------------|
| Compasses | dis 70 & 10 \$ |
| Calipers | dis 70 & 10 \$ |
| Dividers | dis 70 & 10 \$ |
| Cook's Pencil | dis 10 \$ |

| COOPERS TOOLS. | |
|----------------|----------------|
| Bradley's | dis 15 @ 50 \$ |
| Barton's | dis 50 \$ |

| CROW BARS. | |
|--------------------|------------|
| Cast Steel | BB 3 1/2 C |
| Iron, Steel Points | BB 3 1/2 C |

| CURLING IRONS, &c. | |
|-------------------------------------|------------------------|
| 1/2, 3/4, 1 in., \$1.50, 2.00, 2.50 | dis 10 \$ |
| Curling Tong | 10 doz 3.65, dis 10 \$ |
| Pinching Irons | 10 doz 3.50, dis 10 \$ |

| CURRY COMBS. | |
|---|------------------------|
| Fitch's new list. | dis 50 & 10 \$ |
| Hotchkiss, Novelty, new list, July, 1880. | dis 25 \$ |
| Hotchkiss, Excelsior Superior Champion. | dis 25 \$ |
| Lawrence, "Perfect". | dis 50 & 10 \$ |
| Rubber. | 10 doz 3.00, dis 25 \$ |
| Sweet & Clarke. | dis 50 & 10 \$ |
| Lusters. | dis 25 \$ |

| CURTAIN PINS. | |
|----------------|-----|
| Silvered Glass | net |
| White Enamel | net |

| CUTLERY. | |
|--------------------------------------|-----------|
| Association (Table). | net |
| Naugatuck Cutlery Co. | list net |
| Exterior Knife Co. | net |
| Wilson's Butcher and Shoe Knives | dis 30 \$ |
| Ames Shoe Knives. | dis 20 \$ |
| Wm. Rogers Mfg. Co., Plated Cutlery. | Net |

| BOD COLLARS. | |
|----------------|-----------|
| Embossed Gilt. | dis 30 \$ |
| Leather. | dis 40 \$ |
| Brass. | dis 40 \$ |

| DOOR SPRINGS. | |
|-----------------------------|----------------|
| Torrey's Rod, regular size. | 10 doz, \$1.30 |

| Gem (Coll); List, April 19, 1886 | |
|---------------------------------------|----------------|
| Standard—10 doz \$1.35; 9 doz \$1.75. | dis 60 & 10 \$ |

| 8 doz 2.50; 6 doz \$3.50. | |
|---------------------------|----------------|
| Hercules. | dis 50 & 10 \$ |

| DRAWING KNIVES. | |
|--------------------|----------------|
| Middleton Mfg. Co. | dis 75 \$ |
| Crossman's No. 1. | dis 65 & 10 \$ |
| Nobles Mfg. Co. | dis 15 \$ |
| Bradley's. | dis 35 \$ |
| Adjustable Handle. | dis 20 \$ |
| P. S. & W. | dis 75 \$ |
| Douglas. | dis 75 \$ |

| DRILLS AND DRILL STOCKS. | |
|---------------------------|------------------------------|
| Blacksmiths. | \$1.65 net |
| Blacksmiths Self-Feeding. | each, 7.50, dis 20 \$ |
| Breast, P. S. & W. | dis 40 \$ |
| Breast, Wilson's. | dis 30 \$ |
| Breast, Miller's Falls. | each, \$3.00, dis 25 \$ |
| Breast, Bartholomew's. | each, \$2.50, dis 25 & 10 \$ |
| Wilson's Drill Stocks. | dis 10 \$ |
| Automatic Boring Tools. | \$1.65 each |
| Mannar Drill Mfg. Co.— | |
| Model Bench Drill. | \$10.00, dis 50 \$ |
| XXX Post Drill. | \$50.00, dis 50 \$ |

| EGG BEATERS. | |
|--------------|----------------------|
| Dover. | 10 doz 50, dis 25 \$ |

| ACME. | |
|-----------|---------------|
| Victoria. | gross, \$9.00 |

| EMERY AND EMERY PAPER. | |
|------------------------|----------------------|
| Regular numbers. | 10 doz 50, dis 25 \$ |

| FLOUR AND F. F. | |
|----------------------|-----------|
| B. & A. Emery Paper. | dis 20 \$ |

| ENAMELED AND TINNED WARE. | |
|---------------------------|----------------|
| Kettles. | dis 50 & 10 \$ |

| SAUCE PANS. | |
|--------------------|----------------|
| Tinned Sauce Pans. | dis 50 & 10 \$ |

| ECCUTHEON PINS—BRASS. | |
|-----------------------|-----------|
| Escutcheons. | dis 50 \$ |

| DOOR LOCKS. | |
|------------------------------|--|
| Same discounts as Door Locks | |

| BRASS THREAD. | |
|---------------|-----------|
| Brass Thread. | dis 60 \$ |

| WOOD. | |
|-------|-----------|
| Wood. | dis 25 \$ |

| FAUCETS. | |
|----------|-----------|
| Fenn's. | dis 40 \$ |

| FENN'S CORK STOP. | |
|-------------------|---------------|
| Fenn's Cork Stop. | dis 33 1/2 \$ |

| STAR. | |
|-------|-----------|
| Star. | dis 60 \$ |

| FRARY'S PATENT PETROLEUM. | |
|---------------------------|-----------|
| Frary's Patent Petroleum. | dis 40 \$ |

| WEST'S PATENT KEY. | |
|--------------------|-----------|
| West's Patent Key. | dis 50 \$ |

| ANCHOR LOCK. | |
|--------------|-----------|
| Anchor Lock. | dis 45 \$ |

| METALLIC KEY, LEATHER LINED. | |
|------------------------------|-----------|
| Cork Lined. | dis 70 \$ |

| J. SOMMER'S BEST METALLIC KEY. | |
|--------------------------------------|-----------|
| J. Sommer's Cork Lined, 1st quality. | dis 50 \$ |

| FILES. | |
|------------------|---------------------|
| Western File Co. | new list, dis 25 \$ |

| WESTERN FILE CO. | |
|------------------|----------------|
| Western File Co. | dis 60 & 10 \$ |

| BUTCHER'S FILE. | |
|-----------------|-----------------|
| Butcher's File. | dis 45 to 60 \$ |

| MESS & GARNER. | |
|------------------------------|-----------|
| H. Dutton & Sons (new list). | dis 60 \$ |

| HELLER BROS. HORSE RASPS. | |
|---------------------------|----------------|
| Heller Bros. Horse Rasps. | dis 30 & 35 \$ |

| NICHOLSON. | |
|---------------|--------------------|
| New American. | dis 50, 15 & 20 \$ |

| UNION FILE CO. | |
|----------------|----------------|
| Union File Co. | dis 60 & 10 \$ |

| STUBBS, new list. | |
|-------------------|----------------|
| Stubbs. | dis 50 & 10 \$ |

| FLUTING MACHINES. | |
|-------------------------|-------------|
| Knox, 4 1/2-inch Rolls. | \$3.50 each |

||
||
||

| | |
|-----------------------------------|------------|
| HORSE SHOES. | |
| Spurless | \$4.10 |
| Spurless, Light, Medium and Heavy | \$4.10 |
| Horse Shoes | \$4.10 |
| Spurless, Mule Shoes | \$4.10 |
| Horse Shoes | \$4.10 |
| Horse Forged Horse Shoes | \$4.10 |
| Ring Pressure | \$4.10 |
| Calf | \$4.10 |
| Horse Calfed Mule Shoes | \$4.10 |
| Horse Shoes | \$4.10 |
| Horse "Male" | \$4.10 |
| (Horse) Mt. Carmel Or Shoes | 70 cts. 50 |

| | |
|---------------------|----------|
| ICE CREAM FREEZERS. | |
| Parlors—3 quart | \$4.50 |
| 4 quart | \$5.50 |
| 6 quart | \$7.50 |
| 8 quart | \$9.50 |
| 10 quart | \$12.00 |
| Giant, by fly wheel | \$12.00 |
| 14 quart | \$16.00 |
| 18 quart | \$18.00 |
| 21 quart | \$20.00 |
| 25 quart | \$25.00 |
| 33 quart | \$30.00 |
| 40 quart | \$45.00 |
| Discount, 10% off | |
| Americans—3 quart | \$3.75 |
| 3 quart | \$3.75 |
| 4 quart | \$4.75 |
| 6 quart | \$6.75 |
| 8 quart | \$8.75 |
| 10 quart | \$11.00 |
| 12 quart | \$12.50 |
| 14 quart | \$14.00 |
| 16 quart | \$16.00 |
| 18 quart | \$18.00 |
| 20 quart | \$20.00 |
| 24 quart | \$24.00 |
| With fly wheel | \$24.00 |
| 1 quart | \$1.75 |
| 2 quart | \$3.50 |
| 3 quart | \$5.25 |
| 4 quart | \$7.00 |
| 5 quart | \$8.75 |
| 6 quart | \$10.50 |
| 7 quart | \$12.25 |
| 8 quart | \$14.00 |
| 10 quart | \$15.75 |
| 12 quart | \$17.50 |
| 14 quart | \$19.25 |
| 16 quart | \$21.00 |
| 18 quart | \$22.75 |
| 20 quart | \$24.50 |
| 24 quart | \$26.25 |
| 26 quart | \$28.00 |
| 28 quart | \$29.75 |
| 30 quart | \$31.50 |
| 32 quart | \$33.25 |
| 34 quart | \$35.00 |
| 36 quart | \$36.75 |
| 38 quart | \$38.50 |
| 40 quart | \$40.25 |
| 42 quart | \$42.00 |
| 44 quart | \$43.75 |
| 46 quart | \$45.50 |
| 48 quart | \$47.25 |
| 50 quart | \$49.00 |
| 52 quart | \$50.75 |
| 54 quart | \$52.50 |
| 56 quart | \$54.25 |
| 58 quart | \$56.00 |
| 60 quart | \$57.75 |
| 62 quart | \$59.50 |
| 64 quart | \$61.25 |
| 66 quart | \$63.00 |
| 68 quart | \$64.75 |
| 70 quart | \$66.50 |
| 72 quart | \$68.25 |
| 74 quart | \$70.00 |
| 76 quart | \$71.75 |
| 78 quart | \$73.50 |
| 80 quart | \$75.25 |
| 82 quart | \$77.00 |
| 84 quart | \$78.75 |
| 86 quart | \$80.50 |
| 88 quart | \$82.25 |
| 90 quart | \$84.00 |
| 92 quart | \$85.75 |
| 94 quart | \$87.50 |
| 96 quart | \$89.25 |
| 98 quart | \$91.00 |
| 100 quart | \$92.75 |
| 102 quart | \$94.50 |
| 104 quart | \$96.25 |
| 106 quart | \$98.00 |
| 108 quart | \$99.75 |
| 110 quart | \$101.50 |
| 112 quart | \$103.25 |
| 114 quart | \$105.00 |
| 116 quart | \$106.75 |
| 118 quart | \$108.50 |
| 120 quart | \$110.25 |
| 122 quart | \$112.00 |
| 124 quart | \$113.75 |
| 126 quart | \$115.50 |
| 128 quart | \$117.25 |
| 130 quart | \$119.00 |
| 132 quart | \$120.75 |
| 134 quart | \$122.50 |
| 136 quart | \$124.25 |
| 138 quart | \$126.00 |
| 140 quart | \$127.75 |
| 142 quart | \$129.50 |
| 144 quart | \$131.25 |
| 146 quart | \$133.00 |
| 148 quart | \$134.75 |
| 150 quart | \$136.50 |
| 152 quart | \$138.25 |
| 154 quart | \$140.00 |
| 156 quart | \$141.75 |
| 158 quart | \$143.50 |
| 160 quart | \$145.25 |
| 162 quart | \$147.00 |
| 164 quart | \$148.75 |
| 166 quart | \$150.50 |
| 168 quart | \$152.25 |
| 170 quart | \$154.00 |
| 172 quart | \$155.75 |
| 174 quart | \$157.50 |
| 176 quart | \$159.25 |
| 178 quart | \$161.00 |
| 180 quart | \$162.75 |
| 182 quart | \$164.50 |
| 184 quart | \$166.25 |
| 186 quart | \$168.00 |
| 188 quart | \$169.75 |
| 190 quart | \$171.50 |
| 192 quart | \$173.25 |
| 194 quart | \$175.00 |
| 196 quart | \$176.75 |
| 198 quart | \$178.50 |
| 200 quart | \$180.25 |
| 202 quart | \$182.00 |
| 204 quart | \$183.75 |
| 206 quart | \$185.50 |
| 208 quart | \$187.25 |
| 210 quart | \$189.00 |
| 212 quart | \$190.75 |
| 214 quart | \$192.50 |
| 216 quart | \$194.25 |
| 218 quart | \$196.00 |
| 220 quart | \$197.75 |
| 222 quart | \$199.50 |
| 224 quart | \$201.25 |
| 226 quart | \$203.00 |
| 228 quart | \$204.75 |
| 230 quart | \$206.50 |
| 232 quart | \$208.25 |
| 234 quart | \$210.00 |
| 236 quart | \$211.75 |
| 238 quart | \$213.50 |
| 240 quart | \$215.25 |
| 242 quart | \$217.00 |
| 244 quart | \$218.75 |
| 246 quart | \$220.50 |
| 248 quart | \$222.25 |
| 250 quart | \$224.00 |
| 252 quart | \$225.75 |
| 254 quart | \$227.50 |
| 256 quart | \$229.25 |
| 258 quart | \$231.00 |
| 260 quart | \$232.75 |
| 262 quart | \$234.50 |
| 264 quart | \$236.25 |
| 266 quart | \$238.00 |
| 268 quart | \$239.75 |
| 270 quart | \$241.50 |
| 272 quart | \$243.25 |
| 274 quart | \$245.00 |
| 276 quart | \$246.75 |
| 278 quart | \$248.50 |
| 280 quart | \$250.25 |
| 282 quart | \$252.00 |
| 284 quart | \$253.75 |
| 286 quart | \$255.50 |
| 288 quart | \$257.25 |
| 290 quart | \$259.00 |
| 292 quart | \$260.75 |
| 294 quart | \$262.50 |
| 296 quart | \$264.25 |
| 298 quart | \$266.00 |
| 300 quart | \$267.75 |
| 302 quart | \$269.50 |
| 304 quart | \$271.25 |
| 306 quart | \$273.00 |
| 308 quart | \$274.75 |
| 310 quart | \$276.50 |
| 312 quart | \$278.25 |
| 314 quart | \$280.00 |
| 316 quart | \$281.75 |
| 318 quart | \$283.50 |
| 320 quart | \$285.25 |
| 322 quart | \$287.00 |
| 324 quart | \$288.75 |
| 326 quart | \$290.50 |
| 328 quart | \$292.25 |
| 330 quart | \$294.00 |
| 332 quart | \$295.75 |
| 334 quart | \$297.50 |
| 336 quart | \$299.25 |
| 338 quart | \$301.00 |
| 340 quart | \$302.75 |
| 342 quart | \$304.50 |
| 344 quart | \$306.25 |
| 346 quart | \$308.00 |
| 348 quart | \$309.75 |
| 350 quart | \$311.50 |
| 352 quart | \$313.25 |
| 354 quart | \$315.00 |
| 356 quart | \$316.75 |
| 358 quart | \$318.50 |
| 360 quart | \$320.25 |
| 362 quart | \$322.00 |
| 364 quart | \$323.75 |
| 366 quart | \$325.50 |
| 368 quart | \$327.25 |
| 370 quart | \$329.00 |
| 372 quart | \$330.75 |
| 374 quart | \$332.50 |
| 376 quart | \$334.25 |
| 378 quart | \$336.00 |
| 380 quart | \$337.75 |
| 382 quart | \$339.50 |
| 384 quart | \$341.25 |
| 386 quart | \$343.00 |
| 388 quart | \$344.75 |
| 390 quart | \$346.50 |
| 392 quart | \$348.25 |
| 394 quart | \$350.00 |
| 396 quart | \$351.75 |
| 398 quart | \$353.50 |
| 400 quart | \$355.25 |
| 402 quart | \$357.00 |
| 404 quart | \$358.75 |
| 406 quart | \$360.50 |
| 408 quart | \$362.25 |
| 410 quart | \$364.00 |
| 412 quart | \$365.75 |
| 414 quart | \$367.50 |
| 416 quart | \$369.25 |
| 418 quart | \$371.00 |
| 420 quart | \$372.75 |
| 422 quart | \$374.50 |
| 424 quart | \$376.25 |
| 426 quart | \$378.00 |
| 428 quart | \$379.75 |
| 430 quart | \$381.50 |
| 432 quart | \$383.25 |
| 434 quart | \$385.00 |
| 436 quart | \$386.75 |
| 438 quart | \$388.50 |
| 440 quart | \$390.25 |
| 442 quart | \$392.00 |
| 444 quart | \$393.75 |
| 446 quart | \$395.50 |
| 448 quart | \$397.25 |
| 450 quart | \$399.00 |
| 452 quart | \$400.75 |
| 454 quart | \$402.50 |
| 456 quart | \$404.25 |
| 458 quart | \$406.00 |
| 460 quart | \$407.75 |
| 462 quart | \$409.50 |
| 464 quart | \$411.25 |
| 466 quart | \$413.00 |
| 468 quart | \$414.75 |
| 470 quart | \$416.50 |
| 472 quart | \$418.25 |
| 474 quart | \$420.00 |
| 476 quart | \$421.75 |
| 478 quart | \$423.50 |
| 480 quart | \$425.25 |
| 482 quart | \$427.00 |
| 484 quart | \$428.75 |
| 486 quart | \$430.50 |
| 488 quart | \$432.25 |
| 490 quart | \$434.00 |
| 492 quart | \$435.75 |
| 494 quart | \$437.50 |
| 496 quart | \$439.25 |
| 498 quart | \$441.00 |
| 500 quart | \$442.75 |
| 502 quart | \$444.50 |
| 504 quart | \$446.25 |
| 506 quart | \$448.00 |
| 508 quart | \$449.75 |
| 510 quart | \$451.50 |
| 512 quart | \$453.25 |
| 514 quart | \$455.00 |
| 516 quart | \$456.75 |
| 518 quart | \$458.50 |
| 520 quart | \$460.25 |
| 522 quart | \$462.00 |
| 524 quart | \$463.75 |
| 526 quart | \$465.50 |
| 528 quart | \$467.25 |
| 530 quart | \$469.00 |
| 532 quart | \$470.75 |
| 534 quart | \$472.50 |
| 536 quart | \$474.25 |
| 538 quart | \$476.00 |
| 540 quart | \$477.75 |
| 542 quart | \$479.50 |
| 544 quart | \$481.25 |
| 546 quart | \$483.00 |
| 548 quart | \$484.75 |
| 550 quart | \$486.50 |
| 552 quart | \$488.25 |
| 554 quart | \$490.00 |
| 556 quart | \$491.75 |
| 558 quart | \$493.50 |
| 560 quart | \$495.25 |
| 562 quart | \$497.00 |
| 564 quart | \$498.75 |
| 566 quart | \$500.50 |
| 568 quart | \$502.25 |
| 570 quart | \$504.00 |
| 572 quart | \$505.75 |
| 574 quart | \$507.50 |
| 576 quart | \$509.25 |
| 578 quart | \$511.00 |
| 580 quart | \$512.75 |
| 582 quart | \$514.50 |
| 584 quart | \$516.25 |
| 586 quart | \$518.00 |
| 588 quart | \$519.75 |
| 590 quart | \$521.50 |
| 592 quart | \$523.25 |
| 594 quart | \$525.00 |
| 596 quart | \$526.75 |
| 598 quart | \$528.50 |
| 600 quart | \$530.25 |
| 602 quart | \$532.00 |
| 604 quart | \$533.75 |
| 606 quart | \$535.50 |
| 608 quart | \$537.25 |
| 610 quart | \$539.00 |
| 612 quart | \$540.75 |
| 614 quart | \$542.50 |
| 616 quart | \$544.25 |
| 618 quart | \$546.00 |
| 620 quart | \$547.75 |
| 622 quart | \$549.50 |
| 624 quart | \$551.25 |
| 626 quart | \$553.00 |
| 628 quart | \$554.75 |
| 630 quart | \$556.50 |
| 632 quart | \$558.25 |
| 634 quart | \$560.00 |
| 636 quart | \$561.75 |
| 638 quart | \$563.50 |
| 640 quart | \$565.25 |
| 642 quart | \$567.00 |
| 644 quart | \$568.75 |
| 646 quart | \$570.50 |
| 648 quart | \$572.25 |
| 650 quart | \$574.00 |
| 652 quart | \$575.75 |
| 654 quart | \$577.50 |
| 656 quart | \$579.25 |
| 658 quart | \$581.00 |
| 660 quart | \$582.75 |
| 662 quart | \$584.50 |
| 664 quart | \$586.25 |
| 666 quart | \$588.00 |
| 668 quart | \$589.75 |
| 670 quart | \$591.50 |
| 672 quart | \$593.25 |
| 674 quart | \$595.00 |
| 676 quart | \$596.75 |

NEW DEPARTURE IN IRON ROOFING.

As is well known, heretofore only 8-ft. lengths in "V" Crimped Iron have been made. In order to accommodate the growing and special demands of our trade, we now manufacture 6-ft., 8-ft. and 10-ft. lengths in this style.

The Cincinnati Corrugating Co.
CINCINNATI, OHIO.

CAMBRIDGE ROOFING CO.
MANUFACTURERS OF



Also, Plain, Rolled, Corrugated,
Crimped Edge and Beaded,
Roofing, Siding and Ceiling.
CAMBRIDGE, O.

Awarded First Medal by the New
Orleans Exposition.

Crowl's Patent
STANDING SEAM
Roofing MADE OF Steel.

CANTON IRON ROOFING CO., CANTON, OHIO,
MANUFACTURERS OF THE H. W. SMITH PATENT

STEEL
ROOFING

Made of genuine sheet steel
and calaminated steel.

Send for Catalogue, Price List and Samples.



Corrugated IRON.

ROOFING, SIDING and CEILING,
ALL DESIRED GAUGES AND LENGTHS.

Send for our new descriptive
catalogue, estimates and prices.

CORRUGATING CO., CINCINNATI,
OHIO.

IRON ROOFING.

1. "GLOBE STANDING SEAM."
2. "Double Seamed V Crimped."
3. "Excelsior V Crimped," old style
4. "READY ROLLED" "Capped."

GLOBE IRON ROOFING &

HOLTON
ROOFING
SIDING.

IRON ROOFING
CEILING & C.
NEW LISBON, O.
AGENTS WANTED EVERYWHERE

METAL SKYLIGHTS



AND VENTILATORS for Mills, Stores and Dwellings.
Galvanized Iron and Copper Cornices and
Gutters. Metal Shingles. Sheet Metal Work
for buildings. Send for illustrated circular.

E. VAN NOORDEN & CO.
383 Harrison Avenue, - - BOSTON.

SYKES IRON ROOFING CO., NILES, O.



Send for Circular and Price List, and mention this Paper.

Warren's Natural Asphalt Roofing,
Superior to all others for Flat Roofing.

OVER 20,000,000 SQUARE FEET USED WITHIN 10 YEARS.

This roofing is not injuriously affected by atmospheric agencies and will not
waste or become brittle by evaporation as with goods made from Coal Tar. Send
for sample and circular No. 18.

WARREN CHEMICAL & MFG. CO. 114 John Street,
NEW YORK.

CORRUGATED IRON
FOR ROOFING, SIDING, AND
CEILING.
FIVE SIZES OF CORRUGATIONS
CURVED OR STRAIGHT.

Any length up to 10 feet. Any gauge from No. 16 to 27 inclusive.
We want to mail you our new Illustrated Catalogue, (84 pages) the finest ever issued by a roofing company.

THOMPSON MANUFACTURING CO.,
CLEVELAND, OHIO.

FIRE-PROOF
WATER-PROOF
WIND-PROOF

GUTTA PERCHA ROOFING!

The Great Roofing for the South. Send for Southern Manufacturers' References. For Steep
or Flat Roofs, Factories, Mills, Lumber Sheds, etc. Send for Catalogue,
Testimonials, Samples, etc.

Empire Paint & Roofing Co., 1128 & 1130 Race St.,
Philadelphia, Pa.

CRIMPED &
CORRUGATED
IRON &
SIDING,
CEILING,
METAL SHINGLES
MANUFACTURED BY
W.G. HYNDMAN & CO., CINCINNATI, O.

Keene's Cornice Brake



Geo. C. Keene & Co.

4 Lawrence Street, Cincinnati, O.

MANUFACTURERS OF

Cornice Machinery.

ARCHITECTURAL

Sheet Metal Work

ORNAMENTS, STATUARY,
And SPUNWORK IN

BRASS, COPPER & ZINC

Galvanized Iron Cornices,
Window Caps, Finials, Etc

—Manufactured by—

BAKEWELL & MULLINS, Salem, O.

Queen City Printing Ink Co.

CINCINNATI, OHIO.

WITH WHICH THIS PAPER IS PRINTED.
IS MADE BY THE
THE INK QUEEN CITY PRINTING INK CO.
CINCINNATI, O.

MANUFACTURERS OF ALL DESCRIPTIONS OF

INKS!

* Varnishes and Sizes *

FOR PRINTERS' USE.

New York Office, . . . 194 William Street.

Philadelphia Office, . . . 434 Walnut Street.

THE St. James Hotel

Cor. Charles and Centre Streets. BALTIMORE, MD. Near the Washington Monument.

ON THE EUROPEAN PLAN.

Strictly First-Class. Rooms Single and En Suite.

FINEST CAFÉ IN BALTIMORE.

The St. James Hotel has the pleasantest situation, amid beautiful surroundings, and is patronized by the better class of travelers. The hotel is now under a new management, and has been refitted and improved in every way. Secure rooms in advance by addressing

JOHN S. CROWTHER, Manager.

THE STILLMAN

CLEVELAND, OHIO.

Unsurpassed in its Elegance, Fine Cuisine and Table Service.

Only Fire-Proof Hotel in Cleveland.

Every room heated by Steam and lighted by Electric Light.

RATES \$3.50 TO \$5.00 PER DAY.

Elegant suites can be secured by addressing

J. WARREN COLEMAN, Jr., Manager.



Colonnade Hotel,

Chestnut St., Cor. 15th,

One block from new Penns. Railroad Depot.

PHILADELPHIA.

H. J. & G. R. CRUMP.

A FAVORITE RESORT
FOR ALL
SOUTHERN TRAVELTHE
PREMIER FLOUR
OF AMERICA.

Patapsco Flouring Mills.

ESTABLISHED 1774.

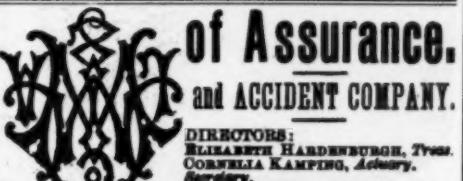
OUR PATENT ROLLER FLOURS

Are manufactured from the CHOICEST WHEAT OBTAINABLE. Their superiority for UNIFORMITY, STRENGTH and UNAPPROACHABLE FLAVOR has long been acknowledged. Our PATAPSICO SUPERLATIVE PATENT STANDS UNRIVALLED. Of a RICH, CREAMY COLOR, it makes a Bread that will SUIT THE MOST FASTIDIOUS.

ASK YOUR GROCER FOR

PATAPSICO SUPERLATIVE PATENT,
CHESAPEAKE EXTRA,PATAPSICO FAMILY PATENT,
ORANGE GROVE EXTRA.C. A. GAMBRILL MNF'G CO.
Office, 214 Commerce St., Baltimore, Md.

The True Idea

of Assurance.
and ACCIDENT COMPANY.DIRECTORS:
ELIZABETH PHILLIPS, Pres.
MARGARET HOLCOMBE, Vice-Pres.
EMILY TAYLOR,
Elizabeth S. Roberts, H. Louise Gates,
MARGARET H. HILLIS, M. D., 406 Fifth Avenue,
JOHN A. KAMPING, Attorney and Counselor, 108 Broadway, New York.MARY PUTNAM JACOBI, M. D., 119 W. 28th Street
Incorporated under the Laws of New York.

FINALLY.

This company avoids complicated schemes and plans by means of which impossible results are promised. Its contracts are plain, easily understood and liberal. It issues the following forms:

1. Ordinary Life Policy, \$100 to \$10,000.
2. Ordinary Accident Policy, \$5,000 death indemnity; \$25 weekly.
3. Combined Life and Accident Policy.
4. \$500 Savings Bond.

BANKS:

BANK OF THE METROPOLIS, New York City.

DEPOSITORY OF EXCESSIVE FUNDS.

FARMERS' LOAN AND TRUST CO., New York City.

The officers would be pleased to furnish any further particulars which may be desired in relation to the Company's affairs, or the way to obtain a policy.

Agents are desired in every city, village and district throughout the healthful sections of the country.

Address all communications to the

WOMEN'S MUTUAL INSURANCE AND ACCIDENT CO.,

10 BROADWAY, NEW YORK.

ITS OBJECT.
This company is the pioneer in throwing down the bars of sex discrimination against women in life insurance. The statistics and common observation prove mortality to be in favor of females at every age, and married as well as single women remove this prejudice, and to secure to women an equal advantage in insurance, the proprietors of this enterprise have devoted themselves. Consistently with this principle WOMEN AND MEN are equally insured in this company without discrimination on account of sex.

ITS MEMBERSHIP.

Insurance persons between the ages of 18 and 50, of approved physical condition. The Life Class is separate and distinct from the Accident Class, members being liable for any premium occurring in the class to which they belong.

ITS PLAN.

Insurance at cost, and embraces the best features of mutual association, with such improvements added as rendered the plan known to be favorable for the member's advantage and the security of the association.

ITS SAFETY AND SECURITY.

It is in an ECONOMICAL system, no IMPOSSIBILITY of insurance, and no SECURITY RESERVE.

FROM

AND

-TO-

CH&D

CINCINNATI, HAMILTON & DAYTON R.R.

CH&D

CINCINNATI, HAMILTON & DAYTON R.R.

TOLEDO,

DETROIT, NIAGARA FALLS, TORONTO,
SAGINAW, AND ALL POINTS IN MICHIGAN AND CANADA.

CONNERSVILLE,

INDIANAPOLIS,

DANVILLE, BLOOMINGTON,

RUSHVILLE,

DECATUR, PEORIA,

AND ALL POINTS WEST AND NORTHWEST.

RICHMOND,

CHICAGO, DELPHI,

LOGANSPORT, AND ALL POINTS IN THE NORTHWEST.

FORT WAYNE,

GRAND RAPIDS, PETOSKEY,

KALAMAZOO, AND ALL POINTS IN MICHIGAN.

Through Sleeping Cars run between Cincinnati and Chicago via Richmond and Air Line, also via Indianapolis and Monon Line; and Cincinnati, Ft. Wayne and Grand Rapids, Cincinnati, Toledo and Detroit.

Parlor Cars between Cincinnati and Indianapolis; Cincinnati, Toledo and Detroit; Cincinnati, Ft. Wayne and Grand Rapids; and Cincinnati and Chicago.

Reclining-chair Cars between Cincinnati and Keokuk, Iowa, via Indianapolis and Decatur, Ill.

SOLID TRAINS BETWEEN CINCINNATI AND CHICAGO.

For information apply to any Railroad Office in the United States or Canada. In Cincinnati, O., at City Ticket Office, N. W., corner Fifth and Vine Sts.; Depot Ticket Office, Fifth and Headly Sts.; also General Passenger Agent's Office, No. 200 West Fourth Street.

C. C. WAITE,

CHAS. H. ROCKWELL,

Vice-Prest. and Gen'l Manager.

Gen'l Pass'r and Ticket Agent.

PIEDMONT AIR LINE.

RICHMOND & DANVILLE R.R. CO.

THE SHORT AND DIRECT LINE FROM

Washington, D. C., and Richmond, Va.,

To Atlanta, Augusta, Columbia, Asheville, Raleigh, Greensboro, Salisbury, Goldsboro, Birmingham, Montgomery, Vicksburg, Shreveport, Mobile, New Orleans, Texas, Mexico and California, and the South and Southwest.

DOUBLE DAILY, SOLID TRAINS between Washington and Atlanta. Pullman's Palace Buffet and Drawing-Room Sleeping Cars without change to Atlanta, New Orleans, Augusta, etc.

For maps, time-tables, rates of passage, freight, etc., apply to nearest Station Agent of the Piedmont Air Line, or to any Railroad Agent of principal lines North or South.

PEYTON RANDOLPH, General Manager.

SOL. HAAS, Traffic Manager.

JAS. L. TAYLOR, Gen. Pass. Agent.

Chesapeake & Ohio Route.

Solid Trains from Washington.

LEAVE WASHINGTON, B. & P. STATION:

11:34 A. M. Day Express for Charlottesville, Staunton, Clifton Forge, Charleston, Huntington, Ashland, etc., etc.

5:30 P. M. Louisville and Cincinnati Express. Pullman Cars and a Solid train to Louisville and Cincinnati, making all Western and Southwestern connections.

Washington Ticket Office,

513 Pennsylvania Avenue,

C. H. CHAPIN, Northeastern Passenger Agt.

JOHN HUIK, General Traffic Manager.

H. W. FULLER, General Passenger Agt.



Issues Policies of Insurance after Careful Inspection of the Boilers, covering Loss or damage to property, and Loss of Life and Personal Injury
ARISING FROM STEAM BOILER EXPLOSIONS.

Full information concerning the plan of the Company's operations can be obtained at the COMPANY'S OFFICE, Hartford, Conn., or at any agency.

M. ALLEN, Pres. W. B. FRANKLIN, Vice-Pres. J. B. PIERCE, Secy.

BOARD OF DIRECTORS:

M. ALLEN, President. LUCIUS J. HENDERSON, President, Anna Fire Insurance Co. F. W. CHENEY, Ass't Pres., Cheney Bros. Silk Mfg. Co. CHARLES M. BEACH, of Beach & Co. DANIEL PHILLIPS, of Adams Express Co. R. W. COOPER, of Cooper & Co. ATTWELL MFG. CO. THOMAS O. ENDERSON, Secretary, Anna Fire Insurance Co. LEVERETT BRAINARD, of One, Lockwood & Brainard, HOM. H. C. BODDISON, Attorney-at-Law, Hartford.

CLIFFORD SPOONER, H. E. Manager, Adams Express Co., Bridgeport, Conn.

LAWFORD & MCKIN, Agents for Maryland, 22 Second St., Baltimore, Md.

ESTABLISHED 1832 ON PRESENT PREMISES.

The Best
—IS—
ALWAYS
—THE—
Cheapest.



Therefore
BUY OUR
COLOPHINE
—OR—
Perfect Oils

The above are our specialties in MACHINERY OILS, and are the best oils for the price manufactured. We can give you anything in the OIL LINE, any grade, at the very lowest prices. Correspondence solicited.

WM. C. ROBINSON & SON,
MANUFACTURERS AND DEALERS IN OILS,
217 South Street, Baltimore, Md.

PAGE BELTING COMPANY,



WARRANTED
A1
STANDARD
MADE BY
PAGE BELTING CO.

all the sta-
of Leather Belting.
and the Putna Brand Lacing
mechanically made; is a buffed
the good qualities of ordinary
Page's Patent. Try it.
No. 21, describing the "Kinds and
for Different Kinds of Work."

JOHN E. RANDLE & CO.
MEMPHIS, TENN.

Founders and Machinists

MANUFACTURERS OF
AJAX STEAM-POWER COTTON PRESS.
Brooks & Albertson Horse-Power Presses.
DEALERS IN
ATLAS ENGINES AND BOILERS.
Mill and Plantation Machinery of every description.
Send for catalogue. Correspondence solicited.



Hill Clutch Works,
Cleveland, O.
HILL
Friction
Clutch.

WALKER MANUFACTURING CO.



Shafting, Hangers,
PULLEYS.

PULLEY CASTINGS
AND MACHINE-MOULDED

GEARING

A Specialty.

Cleveland, Ohio.

Estimates furnished. Write for
Gear and Price-Lists A.

Advertise in the MANUFACTURERS' RECORD.

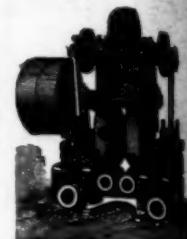
THE STEWART HEATER CO., Buffalo, N. Y.

Nos. 19 and 21 CLINTON ST.

Do You Want
to Economize?

Heaters, Boiler Feed Pumps,
Flue Cleaners, etc.

—It will pay you to correspond with us before purchasing.—



CHAPMAN VALVE MANUFACTURING CO.

MANUFACTURERS OF

VALVES AND GATES



Steam, Water, Gas, Ammonia, Etc.
Gate Fire Hydrants, with and without
Independent Nozzle Valves.



ALL WORK GUARANTEED.

General Office Works, INDIAN ORCHARD, MASS.
Treasurer's Office, 72 Kilby & 112 Milk St., Boston.

THE CURTIS PRESSURE REGULATOR

FOR

STEAM, WATER AND AIR,

Has been the STANDARD now for six years; is unapproachable for simplicity and reliability, and is used by the best posted steam fitters and engineers in all the large cities of the Union; also, in England, Germany, Austria and Russia. It will automatically reduce and control the pressure of any fluid, regardless of the fluctuations of the initial pressure. It is in general use wherever steam, water or air needs to be controlled automatically, in Factories, Breweries, Electric Lighting, Steam Heating and Pumping.

CURTIS REGULATOR CO.

OFFICE AND MANUFACTORY: 160 BEVERLY STREET, BOSTON.

Gen'l Agencies: 100 Liberty St., N. Y.; 503 N. Front St., Phila.; 108 5th Av., Chi-
cago; 210 S. 3d St., Minneapolis; 707 Market St., St. Louis; 21 Union St., N. Orleans.

IMITATION

AN ACKNOWLEDGMENT OF SUPERIORITY.

THE best evidence that the JENKINS BROS VALVES, JENKINS STANDARD PACKING and JENKINS DISCS have extraordinary merit, and are held in high esteem by the public, is that they are being imitated and counterfeited. The imitations resemble the original in appearance only; they lack the general excellence of the genuine. Our friends and customers will sustain us in our endeavor to manufacture the best goods, by not accepting any goods unless stamped as above. This notice has become necessary by the fraudulent use of our name, and to protect the public from being deceived by unprincipled parties placing imitations on the market.

JENKINS BROS.

71 John Street, New York.
105 Milk Street, Boston.
13 S. Fourth St., Philadelphia.

Ludlow Valve Manfg. Co.

OFFICE AND WORKS:
938 to 954 River Street, and 67 to 83 Vail Avenue,

—TROY, N. Y.—



VALVES
Double and Single Gate, $\frac{1}{2}$ to 12 inches,
Steam, Water, Gas, Etc.
Fire Hydrants, Yard and Wash Hydrants, Check and Font Valves
Send for Circular.



SCHAFTING,
PULLEYS, HANGERS, COUPLINGS, ETC.
★ AT LOWEST PRICES. ★

REMINGTON MACHINE CO.

Send for Catalogue. — WILMINGTON, DEL. —

THE BABCOCK & WILCOX CO.

VALUABLE BOOK ON

STEAM BOILERS

FREE ON APPLICATION

WATER TUBE STEAM BOILERS.

BRANCH OFFICES

BOSTON, MASS. 65 OLIVER ST.

PHILADELPHIA, PA. 32 N. 5TH ST.

CHICAGO, ILL. 64 S. CANAL ST.

NEW ORLEANS, LA. 57 CARONDELET ST.

SAN FRANCISCO, CAL. 561 MISSION ST.

LONDON, ENGLAND. 114 NEWGATE ST.

MANCHESTER, ENGLAND. 3 VICTORIA BUILDING

PARIS, FRANCE. 40 RUE DE MALTE

HAVANA, CUBA. WI. 50 SAN IGNACIO.

SYDNEY, N.S.W. 3 SPRING ST.

GLASGOW

107 HOPE ST
CLASCO, SCOTLAND.

THE BABCOCK & WILCOX
CO.
30 CORTLAND ST. N.Y.

THE BABCOCK & WILCOX
COMPANY.
NEW YORK
AND
GLASGOW.

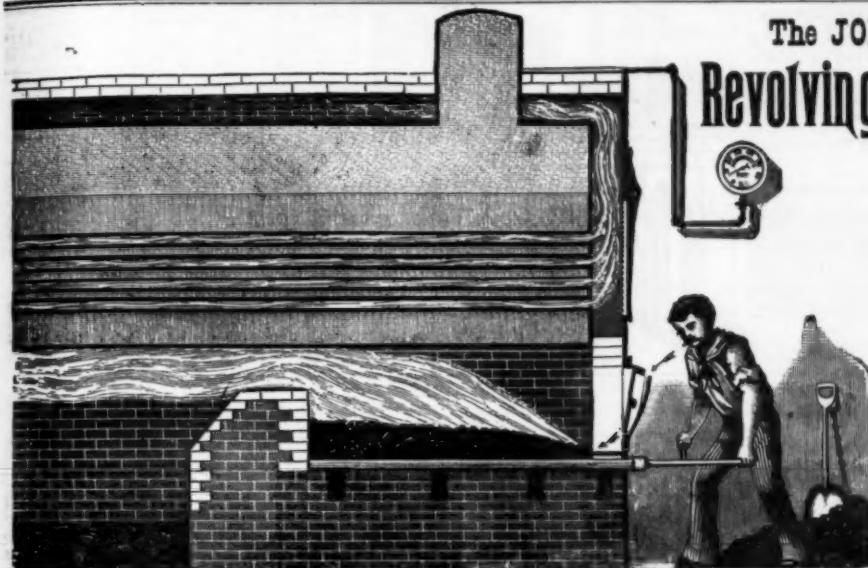
BABCOCK & WILCOX**BOILERS**

Are Used in the

*** SOUTH ***

BT

| | |
|--|-------|
| Pennsylvania Steel Co., Baltimore, Md. | 1,244 |
| Gosport Navy Yard, Norfolk, Va. | 123 |
| Newberry Cotton Mills, Newberry, S.C. | 46 |
| Ponce de Leon Hotel, St. Augustine, Fla. | 416 |
| Gadsden Furnace Co., Gadsden, Ala. | 264 |
| Tennessee Coal, Iron & Railroad Co., South Pittsburg, Tenn. | 604 |
| Senate Wing, U. S. Capitol, Washington, D. C. | 322 |
| Wise Brothers, Baltimore, Md. | 120 |
| Alabama & Tennessee Coal and Iron Co., Sheffield, Ala. | 1,274 |
| Harris Distilling Co., Baltimore, Md. | 220 |
| F. & H. Fries, Salem, N. C. | 120 |
| Joe. Crowley & Sons, Southwood Plantation, La. | 1,220 |
| Louisiana Sugar Refining Co., New Orleans, La. | 916 |



The JOHN ASHCROFT Patent TRIANGULAR
Revolving Steel Grate Bars & Furnace Doors

Eight per cent. in coal saved by the use of these
Doors and Steel Bars guaranteed.

These Steel Bars last four times longer than
any cast-iron bar ever made.

Sectional View of Steam Boiler, fitted with John Ashcroft Patent Furnace Door and Triangular Revolving Steel Grate Bars. Fireman cleansing fires by shaking and revolving the bars, which thoroughly frees the furnace from ashes, and prevents the formation of clinkers, without the use of fire tools or opening the furnace door. RESULT.—Increase of steam and a saving of coal, and no injury to the boiler by cold air impinging on the boiler shell. By this operation a saving of 8 per cent. is secured.

FOR INFORMATION AND PRICES, ADDRESS

The John Ashcroft Patent Grate,
Bar and Furnace Door Manfg Co.
No. 73 Gold Street, New York.

P. O. BOX 100.

SAVE FUEL.

Are you putting cold water into
your boiler?

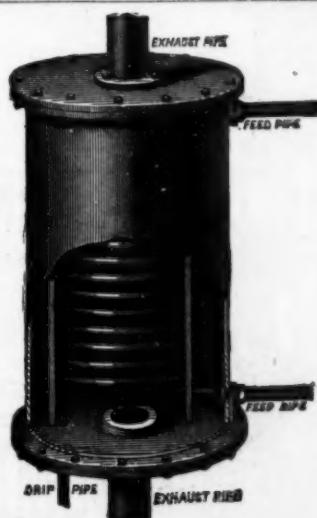
You can heat it boiling hot with
the exhaust steam out of your engine.

You would save TWENTY-FIVE PER
CENT. of the fuel required to do the
same work without a

Feed Water Heater.

Send for our catalogue on this subject.

D. A. Tompkins Co. Charlotte, N. C.

**THE IMPROVED FLORIDA
STEAM HEATER**

The best and most complete House Heater in the world. Self-feeding, automatic, portable and saves all expense of brick-work. Most economical. Carries steam from 10 to 12 hours without attention. Compact. 14 sizes, from 4 to 6 feet high. Anti-clinker grate, easily shaken, no dust. Sales larger than the combined sales of all reputable Steam Heaters.

3500 in ACTUAL USE,
all giving the best satisfaction. Estimates furnished on application. Send for Illustrated Catalogue. Address

PIERCE, BUTLER & PIERCE MFG. CO.,
SOLE MANUFACTURERS, SYRACUSE, N.Y.
Geo. C. PIERCE, 97 William St., New York.
CRANE BROS. MFG. CO., Chicago, Ill.
JAS. H. ROBERTSON & CO., Baltimore, Md.
N. G. NELSON MFG. CO., St. Louis, Mo.
B. TABER & SON, Chicago, Ill.
JAMES P. WOOD & CO., Philadelphia, Pa.



IT WILL PROVE
To investigate the proven merits of
THE HARRISON SAFETY BOILER
Before purchasing your steam plant.

Address, Harrison Safety Boiler Works,
Philadelphia, Penna.Southern 2 & 4 S. Pryor St.
Atlanta, Ga.**TO YOUR INTEREST**

IF YOU THINK THE RELIANCE
Safety Water Columns

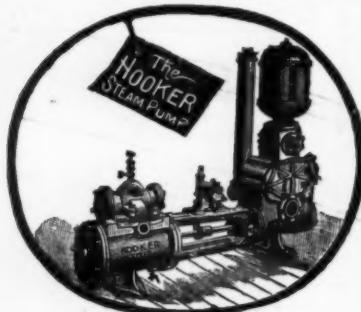
Promote carelessness, you are greatly mistaken. There is not a man living, be he skilled engineer or negro stoker, who will not, from the very nature of things, watch the water closer with than without them. They are as certain to not whistle if the water is right as they are to whistle if it is wrong, and those in attendance take good care to keep it right. Through extra watchfulness and these automatic alarms the best economical results are obtained, and the danger of explosions and damage from too much and too little water is reduced to a minimum. They are a needed safeguard, and you can ill afford to be without them. They are for sale and warranted by dealers and boiler makers generally. Send for illustrated price-list.

**RELIANCE GAUGE CO.**

Argyle Building,
CLEVELAND, OHIO.

The Best Steam Pumps

FOR EVERY SERVICE.



MANUFACTURED BY

The Hooker-Colville Steam Pump Co.
1101 N. 2d STREET,
Send for Catalogue. ST. LOUIS, MO.

Subscribe to the MANUFACTURERS' RECORD
Price \$3.00 a year, or six months for \$1.50

IF YOU WANT A STRONG, HEAVY STEAM PUMP FOR HEAVY WORK OR DIFFICULT DUTY, CORRESPOND WITH
C. H. BURTON STEAM PUMP WORKS. - Cleveland, Ohio. U.S.A.

WHY THIS IS PUT HERE!

NEW PULSOMETER,

THE CHEAPEST AND BEST STEAM PUMP IN THE MARKET. PRICES LOWER THAN ANY OTHER.

More Efficient, Simple, Durable, and more Economical, both as to running expenses and repairs, than any other Steam Pump.

For Mining, Railroad or Steamboat use, Paper Mill, Chemical or Gas Works, Tannery, Brewery or Sugar Refineries, Draining Quarries, Cellars or

Plantations, Irrigating or Hydraulic Mining.

Call or write for our new 32 page Illustrated Descriptive Book containing Full Particulars, Reduced Net Prices, and hundreds of A-1 Testimonials. Mailed Free.

Pulsometer Steam Pump Co., 120 Liberty St., N. Y.



THE CANTON STEAM PUMP CO.
MANUFACTURERS OF
MILLER IMPROVED, DUPLEX, UNIQUE
AND TORRENT STEAM PUMPS.

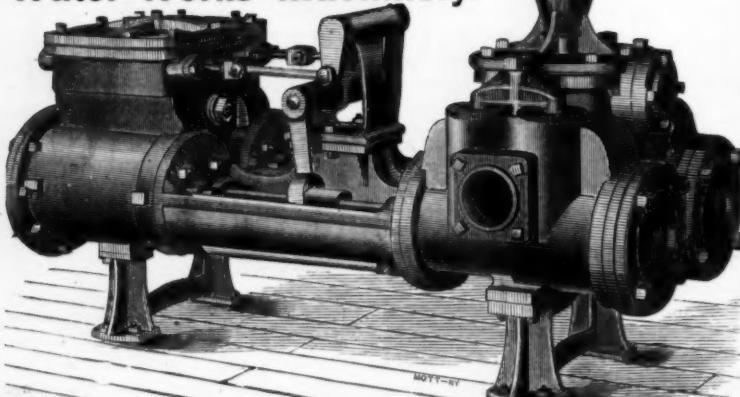
"A Steam Pump will save its cost in fuel over an injector in four months' use." If you want a first-class, reliable Boiler Feeder or Steam Pump for any purpose at reasonable price, address
The CANTON STEAM PUMP CO.
Canton, Ohio.

THE IMPROVED SMITH & VAILE
Single, Duplex and Compound

STEAM PUMPS

FOR EVERY DUTY.

Water-Works Machinery.



13 1/2 in. Steam Cylinder, 20-in. Water Cylinder and 24 in. stroke Improved Low-Service Pump.

The Smith & Vaile Co.

→ DAYTON, O. and NEW YORK. ←

112 LIBERTY STREET.

Plans and Estimates for Hydraulic and Oil Mill Machinery on Application.

EASTERN & SOUTHERN AGENTS:

THOS. K. CAREY & BROS., 21 S. Charles Street, Baltimore, Md.
G. W. STORER, 149 N. 3d Street, Philadelphia, Pa.
D. A. TOMPKINS CO. - - - Charlotte, N. C., and Atlanta, Ga.

Subscribe to the MANUFACTURERS' RECORD.

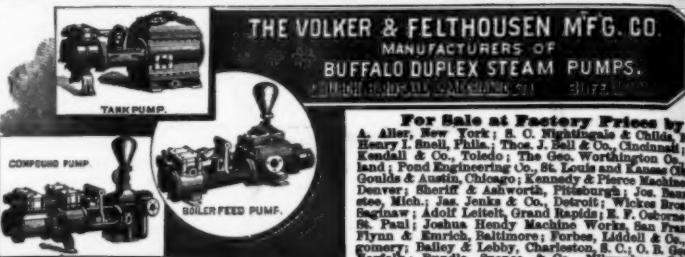


Simple, Efficient, Durable and Economical. Send for Catalogue.

Dean Bros Steam Pump Works.
Indianapolis, Ind.
Boiler Feeders, Duplex Pumps,
Fire Pumps, Send for Catalogue



VALLEY MACHINE CO. EASTHAMPTON, MASS



For Sale at Factory Prices by
A. Allen, New York; C. C. Nightingale & Childs, Boston;
H. C. Hall, New York; T. C. T. Hall, Cincinnati; Shaw,
Kendall & Co., Toledo; The Geo. Washington Co., Cleveland;
Fond Engineering Co., St. Louis and Milwaukee;
Goulds & Austin, Chicago; Kennedy & Pierce Machinery Co.,
Denver; Sheriff & Ashworth, Pittsburgh; Joe Bear, Man-
sfield, Mich.; A. & C. Lovell; J. C. Ickes Bros., East
St. Paul; Joshua Hendy Machine Works,杭; Flynn &
Emrich, Baltimore; Forbes, Liddell & Co., Hager-
stown; Bailey & Leamy, Charleston, S. C.; O. R. Goodwin,
Norfolk; Rundie, Spence & Co., Milwaukee; Columbus
Supply Co., Columbus, O.; C. S. Leeds & Co., Minneapolis, Minn.; H. D. Coleman, New Orleans, La.



PUMPS & HYDRAULIC MACHINERY.

Send for new No. 14 Catalogue.

13-23 OVID ST., SENECA FALLS, N. Y.
And 60 BARCLAY ST., NEW YORK.

HYDRAULIC JACKS.

BEST IMPROVEMENTS. MOST STYLES.

Hydraulic Presses, Hydraulic Pumps, Valves & Fittings,

Vreeland's Transfer Jacks, Hydraulic and Screw Punches,

LEVER PUNCHES AND SHEARS.

WATSON & STILLMAN
210 E. 43d Street, NEW YORK.



THE LAIDLAW & DUNN CO.,
CINCINNATI, O.

Manufacturers of the

"Hero" Vertical Boiler-Feeders,

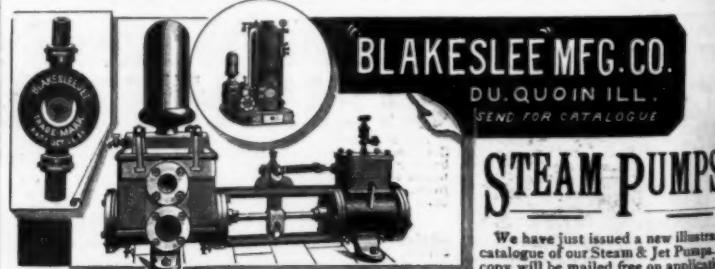
AND

"STANDARD"

DUPLEX

PUMPS

WITH BRASS
REMOVABLE WATER CYLINDERS
Send for descriptive circulars.



BLAKESLEE MFG. CO.
DU. QUOI N. ILL.

SEND FOR CATALOGUE

STEAM PUMPS.

We have just issued a new illustrated
catalogue of our Steam & Jet Pumps. A
copy will be mailed free on application.

BLAKESLEE MFG. CO.

72 Washington Street, - - - DU QUOI N. ILL.

SENECA FALLS PUMP & FIRE APPARATUS WORKS



RUMSEY & CO. (LIMITED) PROPRIETORS, SENECA FALLS, N.Y. U.S.A.

CAMERON STEAM PUMPS.

PUMPS FOR
BOILER FEEDING
MINES
REFINERIES,
BREWERIES,
TANNERIES,
IRRIGATING,
FIRE PURPOSES,
RAILROADS &
FILLING TANKS.
CRANK & FLY WHEEL
& VACUUM PUMPS.

SEND FOR ILLUSTRATED
CATALOGUE A.

MINING PUMPS.

SIMPLE,
COMPACT,
DURABLE,
EFFICIENT.
ADAPTED to ALL
PURPOSES.
NO OUTSIDE
VALVE GEAR.

The A. S. Cameron Steam Pump Works,
FOOT OF EAST 23D STREET. NEW YORK. PISTON PATTERN. PLUNGER PATTERN.

ARTESIAN WELL PUMPS.

ESTABLISHED 1851 — POOLE & HUNT. — 1851

Founders and Machinists.

POOLE & HUNT'S
LEFFEL • TURBINE • WATER • WHEEL,

Prices as Low as any

other First-Class Wheel.

Machine • Moulded •
MILL GEARING.

Our plant for the production of MACHINE- MOULDED MILL GEARING is unequalled in the country, and we are prepared to fill orders with dispatch and at GREAT SAVING IN COST OF PATTERNS.



Shafting, Pulleys,
HANGERS, PEDESTALS.

SHAFTING, PULLEYS, HANGERS
and COUPLINGS, of latest and most ap-
proved designs.

N. B.—Shipping facilities the best in all
directions.

Send for Pamphlet. Send for Price-List.

POOLE & HUNT, BALTIMORE, MD.

PUMP GOVERNORS

Dense and other pump manufacturers. You can set your pump to any speed, which
will be maintained in spite of variable steam or water pressure.

MASON REGULATOR CO., Boston, Mass.

Our Steam Pump Governor has for the past three years been used by Washington, Knowles, Blake,

Shafting, Hangers.

Continuous of every
Description made.
Stationary, Distillery
Mill and Boiler Work.

NO. 118 W. MARQUETTE, BALTIMORE, MD.

BUY THE BRUSH

Then you will have the best of all

Electric ★ ★ Apparatus

Write immediately for a catalogue regarding

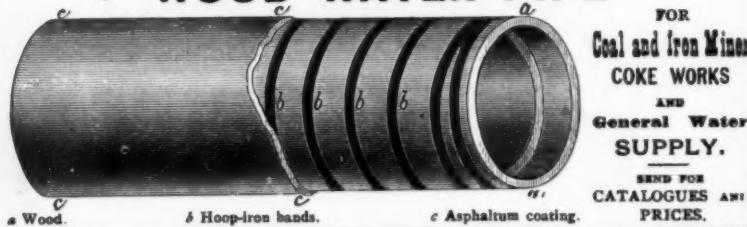
Arc and Incandescence, Brush Lights and Motors.

The Brush Electric Co.

CLEVELAND, O.

A. WYCKOFF & SON, ELMIRA, N. Y.

MANUFACTURERS OF
WOOD WATER PIPE



FOR
Coal and Iron Mines
COKE WORKS
AND
General Water
SUPPLY.
SEND FOR
CATALOGUES AND
PRICES.

New Tangye Buckeye Automatic Cut-Off Engines

25 TO 1,000 H. P.

These engines are the combined results of long experience with automatic cut-off regulation and most careful revision of all details. They are designed and constructed for heavy and continuous duty at medium or high rotative speeds. Highest attainable economy in steam consumption and superior regulation guaranteed. Self-contained Automatic Cut-off Engines, 1/2 to 10 horse-power, for driving dynamo machines, a specialty. Illustrated circulars, with various data as to practical steam engine construction and performance, free by mail. Address

IN USE, OVER 1,000.
Sale Agents—Wiggs & Bacon, Birmingham, Ala.
Jas. P. Creighton, Louisville, Ky.

Buckeye Engine Co., Salem, Ohio.

There is no Roof Equal to a Good Tin Roof.

See that your tinner uses only the Best Material on your Buildings. Every sheet of "GILBERTSON'S OLD METHOD" is stamped with Brand and Gauge Mark. In addition the net weights of the plates are branded upon the boxes; and the goods are fully guaranteed.

MERCHANT & CO.
PHILADELPHIA. NEW YORK. CHICAGO. LONDON.

FOR THE LATEST IMPROVED GAS WORKS APPARATUS AND HOLDERS.

ADDRESS
KERR-MURRAY MANUFACTURING CO., FORT WAYNE, IND.
PLANS, ESTIMATES AND DRAWINGS FURNISHED.

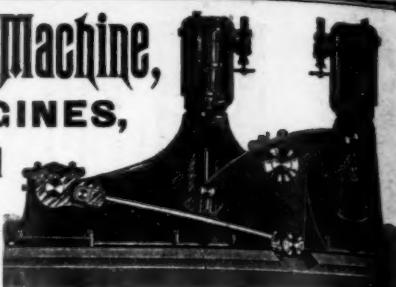
Hercules ICE Machine, CORLISS ENGINES,

Hydraulic and Rolling Mill

WORK.

HEAVY MACHINERY A SPECIALTY.

Write for Estimates and Catalogue.
Mention this paper.



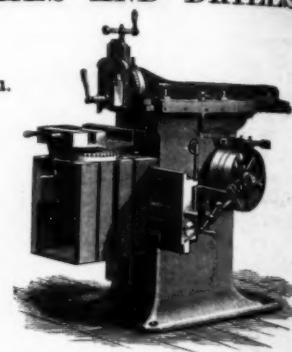
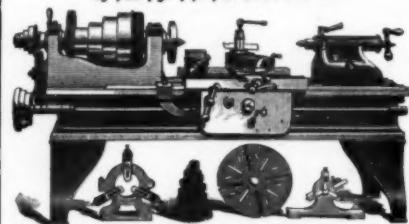
HERCULES IRON WORKS, CHICAGO, ILL.

SHAPERS, ENGINE LATHES AND DRILLS,
Lodge, Davis & Co.

CINCINNATI, OHIO.

Write for Prices. It will pay you.

20", 24" Upright Drills.
25", 28", 32", 40", B. G. B. F. Drills.



LITTLE GIANT PORTABLE FENCE LOOM

Weaves the Fence on the Posts in Position.

Save Money by Building your own Fences
Costs but 51 Cents per Rod to Build.
Capacity Sixty Rods Per Day!

MANUFACTURED BY
RICHMOND CHECK ROWER CO., 1100 & 1102 North E St., Richmond, Ind.

CHATTANOOGA, TENNESSEE.
CHATTANOOGA SAW WORKS.
MANUFACTURERS OF
SUPERIOR SAWS.
MOULDING KNIVES OF EVERY DESCRIPTION.
ESPECIAL ATTENTION
GIVEN TO THE REPAIRING OF ALL KINDS OF SAWS.

THE
Universal Radial Drill Co.
CINCINNATI, O.
Manufacturers Exclusively of
"Universal" AND "Radial" Drilling Machines
TO STANDARD GAUCES.
Prices upon application. Correspondence solicited.

ESTABLISHED 1852.
The James Ohlen & Sons Saw Manufacturing Co.
INCORPORATED 1884.
COLUMBUS, OHIO. MANUFACTURERS
Solid and Inserted Tooth Circular Saws.

Mill, Muley, Gang, Drag, Cross-Cut & Band Saws.
Our Champion Chisel-Tooth Saws will stand steam or any other feed
in all kinds of timber. No keys or rivets to strain blade, and are easily
adjusted and absolutely secure. Any saw bearing our trade mark
(James Ohlen & Sons) is warranted superior to all others. Price-list
free on application. Mention this paper.



"THE ONLY PERFECT" BUFFALO PORTABLE FORGES
THE LIGHTEST, MOST DURABLE, FASTEST WORKING
STRONGEST, AND IN EVERY WAY THE BEST PORTABLE FORGE
MADE. BUFFALO FORGE CO., BUFFALO, N.Y.